

DECEMBER 1956

# CCJ

## COMMERCIAL CAR JOURNAL

A CHILTON PUBLICATION

THE MAGAZINE FOR TRUCK AND BUS FLEET OPERATORS



*in this issue*

Fleet Engineer: He's Management  
Reefer Research Pays Says Emery  
1956 Index of Editorial Features

# Now at your Dodge Truck Dealer's!



## New DODGE *PowerGiants*

Come see and drive the only trucks with all-new V-8 power, advanced *Forward Look* styling, new comfort cabs, and exclusive push-button automatic transmission!

Now, Dodge leads the low-priced three in all important measures of value!

**You get MORE POWER**—from 204-hp. pick-ups to 232-hp. tandems!

**You haul BIGGER LOADS!** From 4,250 lbs. G.V.W. to 65,000 lbs. G.C.W., new *Power Giants* carry more profitable loads.

**You enjoy BETTER PERFORMANCE!** No other truck can touch these big, new Dodge V-8 *Power Giants* for time-saving, step-out-front zip.

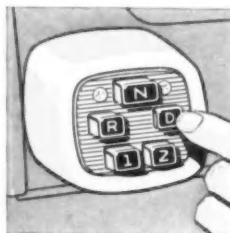
**You enjoy EASIER DRIVING!** Only Dodge trucks give you push-button shifting! \* And the industry's sharpest turning saves you work in traffic.

**Drive 1957's most advanced trucks—V-8 or 6!**

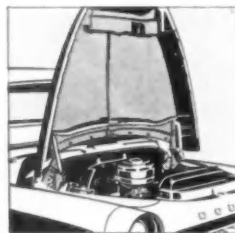
\*Available on all low-tonnage and forward-control models.

### DODGE TRUCKS

WITH THE *FORWARD LOOK* 



**Exclusive Push-button Transmission**—First in any truck! Shifting is entirely automatic. Just push a button, and go! Trouble-free. Saves time, makes driving easier.\*



**Exclusive Full-opening Hood**—Two-position alligator-type hood opens to a full 90° for complete engine servicing, or half-way for routine oil and water checks.

**GET YOUR DODGE DEALER'S DEAL BEFORE YOU DECIDE!**





## "Priceless"

**T**his delightful scene in New Orleans exemplifies Quality Representation of a Quality Business. Stylish delivery trucks can also express your Standards in neighborhoods where advertising is priceless.

It is fitting that your trucks should be up to your Standards of Quality and free from rust, corrosion, denting and excessive deadweight. They should be attractive in design and economical in operating and maintenance costs, in keeping with efficiency.

Those who are heedless of Quality and Thrift in selecting Delivery Trucks and Bodies misrepresent their standards and

thus reduce results and profits.

Olson Aluminum Bodies by Grumman have won their way into the finest delivery fleets. Their success has forced steel-body builders to produce imitations. But only Grumman has a Quarter Century of know-how in designing and producing *aero-type* aluminum alloy bodies. Bodies by Grumman are "Priceless" — they Pay for Themselves thru Savings!

Ask your Chevrolet, Ford, Dodge or GMC dealer about Olson Bodies by Grumman or write to us for a catalogue and a condensed summary of "Today's Economics of Route Deliveries."

J. B. E. OLSON CORPORATION, 1740 BROADWAY, NEW YORK 19, N.Y.

# COMMERCIAL CAR

— DECEMBER 1956 • Volume 92 • No. 4 —

## Contents . . .

### "Do It Yourself" Maintenance Cuts Costs . . . 66

Red Star Express is proud of its 40-man maintenance crew that makes the most of its time and skills developing time-saving shop tools, even builds special bodies

### St. Louis Converts Bus to Salt Shaker . . . . . 70

Public Service fleet has made several from old buses. Hydraulic motor powered and one man operated, they can spread a 5-ton load of salt in a 12-ft spray at 15 mph

### The National Truck Show Is This Month . . . 72

Over five dozen trucks are now on exhibit at the National Auto Show in New York City. Here is a make-by-make preview of a few of the new models you'll see there

### Fleet Engineer: He's Part of Management . . . 74

From the Society of Automotive Engineers National Transportation Meeting, a timely report by Ted McGill on the new authority and duties called for in today's fleet boss

### Two Ways to Ease the Mechanic Shortage . . 76

Ame Neyhart calls for an "action" training program, while a panel of fleet operators suggests another approach is to make the vehicle easier to maintain and service

### Reefer Research Pays Dividends at Emery . . 78

Two years of intensive research pays off for Emery Transportation in a three point modernization program calculated to reduce cargo damage, boost trailer life 50 per cent

### Meet the "Trailerator" . . . . . 80

National Bureau of Standards and Dept. of Agriculture join to develop a laboratory solution to the measuring of comparative heat loss among various reefer trailers

### New Jeep Has Forward Control . . . . . 82

Willys new truck is rated at 5000 lb GVW with 6-ft body, 81-in. wheelbase and 147½-in. overall length. Body floor is 24 in. from the ground to speed freight handling

### Index of 1956 Features . . . . . 85

The year's top articles appearing in Commercial Car Journal arranged under 15 subjects to make them easy to find for rereading or putting to work in your fleet shop

### Diamond T Adds a Medium Duty . . . . . 88

New Model No. 431 is rated at 19,000 lb GVW, 35,000 lb GCW. It has easy-to-remove fenders to provide accessibility for maintenance on 6-cyl, 140-bhp XL-264 engine

### TDA Announces "Wide-Range," 2-Speed Axle 88

Timken-Detroit Axle presents details of its "wide-range," 2-speed axle that does a job without split or 2-stick shifting. It comes in 2:1 or 2½:1 ratios

### For In-Plant Feeding, Try The Blind . . . . . 142

Here's how Consolidated Freightways, Portland, Ore., works with the state's Blind Commission to provide on-the-spot cafeteria facilities for the fleet's employees

### Chill Factor, Arctic Vehicle Problem . . . . . 148

Truck-Trailer Manufacturers Assn. Managing Director John B. Hulse reports on some problems and interesting operations encountered on a recent trip to Army's Greenland bases

### Federal Highway-Use Tax Schedule . . . . . 116

Here are the amounts, definitions and instructions as issued by the Internal Revenue Service late last month for payment of the levy. Returns are due before Feb. 1, 1957

## Departments . . .

The Overload . . . . .	5	New Products . . . . .	52
At Your Service . . . . .	9	Dec. News Roundup . . . . .	90
Dates & Doings . . . . .	28	New Truck Registrations . . . . .	92
Up Front with CCJ . . . . .	33	Among the States . . . . .	156
Laugh It Off . . . . .	42	Safety Awards . . . . .	168
Bulletin Board . . . . .	46	Fleet Notes . . . . .	168
Fleetman's Library . . . . .	50	Factory Flashes . . . . .	176



### ON THE COVER . . .

Mere facts pale before Suzy and Jimmy's welcome to the Postman and his armful of gifts from Gran and Gramps. But we must mention that the truck is one of the newest of some 90,000 operated by the world's largest fleet. Now, if you were the Postman, would those kids make you forget you've had a tough day of winter driving? His smile is your answer.

# JOURNAL

Copyright 1956 by Chilton Company (Inc.)

## Editorial Staff

Charles Bartlett Rawson, Editor

Ernest S. Forest ..... Associate Editor  
Jack Colgan ..... Special Features Editor  
Paul A. Murphy ..... Technical Editor  
Joseph Geschelin ..... Detroit Tech. Editor  
Leonard Westrate ..... Detroit News Editor  
George Baker, Ray M. Stroupe, Neil R. Regeimbal ..... Washington News Editors  
R. Raymond Kay ..... Pacific Coast Editor  
Kenneth Rose ..... Midwest Editor  
Howard Kohlbrenner ..... Art Director  
Marcus Ainsworth ..... Statistician  
Paul Wooton ..... Washington Member of the Editorial Board



### COMMERCIAL CAR JOURNAL

with which is combined *Operation & Maintenance*

Reg. U. S. Pat. Off.

Member B.P.A.

RUSSELL W. CASE, JR., Publisher

E. H. MILLER, Adv. Mgr.

E. W. HEVNER, Cir. Mgr.

C. W. HEVNER, Asst. to Publisher

J. P. JENNINGS, Research

#### REGIONAL MANAGERS

R. J. BIRCH San Francisco  
GORDON A. BRAUNINGER, Dallas  
ROBERT N. CAIRD, JR., New York City  
E. E. ELDER, Detroit  
L. H. JACKSON, Los Angeles

FRANK W. MCKENZIE, San Francisco  
CURTIS F. MOSS, Chicago  
WILLIAM P. SAUNDERS, Cleveland  
PHILIP A. STREICH, Detroit  
H. M. WERTZ, Chicago

#### OFFICES

Philadelphia 39, Pa.—Chestnut & 56th Sts., Phone Sherwood 8-2000  
Chicago 1, Ill.—369 North Michigan Ave., Phone Franklin 2-4243  
Cleveland 15, Ohio—524 E. F. Keith Bldg., Phone Superior 1-2569  
Dallas 18, Texas—8557 Eustia, Phone Davis 7-4176  
Detroit 2, Mich.—1015 Stephenson Bldg., Phone Trinity 5-2000  
Los Angeles 57, Cal.—198 South Alvarado St., Phone DUnkirk 7-4337  
New York 17, N. Y.—100 East 42nd St., Phone Oxford 7-3400  
San Francisco 4, Cal.—200 Montgomery St., Phone Douglas 2-4393  
San Francisco 4, Cal.—1255 Market St., Phone UUnderhill 1-9737  
Washington 4, D. C.—1091 & 1093 National Press Bldg., Phone EXecutive 3-2474

One of the Publications Owned by  
**CHILTON COMPANY (INC.)**  
Chestnut and 56th Streets, Philadelphia 39, Pa., U. S. A.

#### Officers and Directors

JOSEPH S. HILDRETH, Chairman of the Board  
G. C. BUZBY, President

#### Vice-Presidents

P. M. FAHRENDORF HARRY V. DUFFY  
WILLIAM H. VALLAR, Treasurer JOHN BLAIR MOFFETT, Secretary  
GEORGE T. HOOK ROBERT E. McKENNA  
L. V. ROWLANDS IRVING E. HAND  
MAURICE E. COX EVERETT B. TERHUNE, JR.  
FRANK P. TIGHE RUSSELL W. CASE, JR.  
JOHN C. HILDRETH, JR.

COMMERCIAL CAR JOURNAL is published monthly by Chilton Co., N. W. Cor. Chestnut & 56th Sts., Philadelphia 39, Pa. Subscription price: United States and Possessions, \$3.00 per year; all other countries \$10.00 per year. Single copies 50¢, except Apr. and Nov.—\$1.00. Accepted under controlled circulation at Philadelphia, Pa.



is  
ugly  
“accessory rust”  
defacing  
the  
sides  
of your  
trucks?



3" reflector



Armored  
Clearance-  
marker  
light

Yankee's "Alumiline"  
armored clearance-  
marker lights and  
reflectors can't rust...  
and aluminum is lighter,  
adds to payloads.



ALUMINUM ACCESSORIES

Send for complete catalog of fleet safety accessories  
YANKEE METAL PRODUCTS CORP., Norwalk, Conn.



## Like to save plenty of "Lettuce"?

### Follow the Goodyear Fleet Battery Maintenance Plan

Here's a plan that's as easy to follow as putting a greenback in your pocket. And the savings it will bring you on fewer battery replacements will start showing up fast.

This free plan is called the Goodyear Fleet Battery Maintenance Plan. And it keeps a constant lookout for the No. 1 battery killer—improper voltage regulation—the only way it can be done.

At each watering, batteries are load-tested with the Goodyear All-Purpose Tester (above) for state of charge—and the findings are recorded on a Fleet Battery Record Card—one for each battery.

Whenever findings go above or below the stripe you see on the Record Card, you know voltage is too high or too low and needs prompt adjustment.

By spending less than two minutes a week per battery, you get longer battery life, longer electrical system service—and fewer road delays.

And the savings continue to grow when you use this plan with Goodyear Heavy-Duty Truck and Bus or Diesel-type batteries. Send in the coupon for the whole story today.

Goodyear, Battery Department, Akron 16, Ohio.

# GOOD YEAR

THE GREATEST NAME IN RUBBER

**SEND FOR FREE  
BOOKLET TODAY!**

THE GOODYEAR TIRE & RUBBER COMPANY, INC.  
Dept. X-7912, Akron 16, Ohio

Please send me a copy of the Goodyear Fleet Battery Maintenance Manual.

Name.....

Firm.....

Street Address.....

City.....Zone.....State.....

Number of trucks in fleet.....



# THE OVERLOAD

E D I T O R I A L C O M M E N T

## The Industry's Best Friend

WE STOLE a few minutes the other day to take a year-end look at the industry's status quo. Remember? That's supposed to be Latin for "the mess we's in." But in spite of all the battles, the "mess" looks pretty good. In our special crystal ball, that looks back as well as forward, one word stands out—Associations. A few examples will show why.

The people of Nebraska turned down their ton-mile tax. That's the one that was up for public referendum.

Halfway across the nation, the people of Pennsylvania have a sound transportation economy. "The Fair Truck Bill" was passed more than a year ago, but it took awhile to bring equipment up-to-date.

On the national level, the Congress has so far blocked all attempts to change transportation policy. The truck share of new highway taxes is within reason. Private truck users are still free to come and go as they please, so long as they do not haul for hire.

Point is that all these things have a common denominator. Most Nebraskans didn't know what a ton-mile tax means. Most Pennsylvanians had no idea what truck sizes and weights should be. And very few Congressmen understood the proposed Interstate Commerce Act changes.

But men in the industry did! What's more,

they did something about it. Sometimes it was just one man that started the ball rolling. His voice in the wilderness meant little till other voices joined in. When there were enough voices in the chorus, they were heard.

Always there must be a leader for the chorus. And nearly always he comes from an association. He may be a manager, an officer, a committee chairman or a whole group of men united in a common cause.

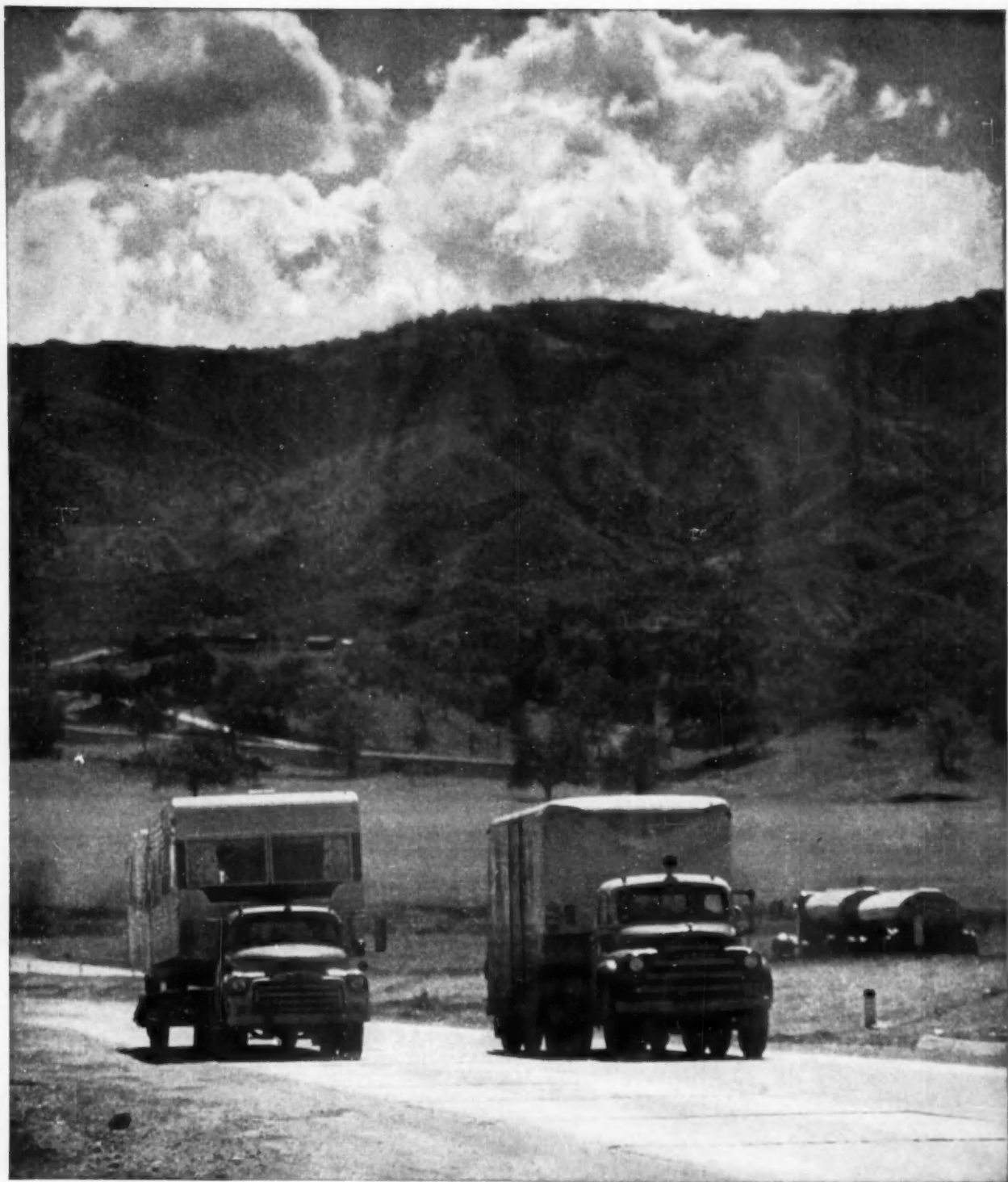
Some of your problems may be strictly local, some statewide and some national. Some may have to do with safety, others with maintenance. And some are strictly a matter of survival.

Many of your problems may now be history. More—like the Nebraska tax or the proposed changes in Washington—will keep recurring year after year. And still other new ones lie just around the corner of tomorrow.

Wherever and whenever the going gets rough, chances are good that the industry's best friend is its network of associations.

Yet, one sad fact remains. Some folks still just go along for the ride. They share in all the benefits but don't pay their way in either dollars or time. How about you? As the holiday season approaches, won't you "think on these things"? Then, with all hands joined we can have the Merriest Christmas yet!

Bart Rawson  
Editor



# TEXACO



# Longer mileage... lower costs

Engines lubricated with Texaco D 303 Motor Oil HD deliver more mileage between overhauls, require less maintenance expense.

This great oil is ideal for heavy duty service in gasoline and diesel engines. It keeps them clean, free from harmful deposits—assures free-working rings and valves—keeps wear at a minimum. With *Texaco D 303 Motor Oil HD* you get more mileage, lower fuel consumption, lower maintenance costs.

For chassis lubrication, use *Texaco Marfak*—unbeatable for protection against wear and rust. In wheel bearings, *Texaco Marfak Heavy Duty* prolongs bearing life, with no seasonal change needed. If you prefer a multi-purpose lubricant for all grease

lubrication, the answer is new, lithium-base *Texaco Marfak Heavy Duty Special 2*.

In differentials and transmissions, *Texaco Universal Gear Lubricant EP* assures smoother gear performance, lower costs.

Let a Texaco Lubrication Engineer help you raise efficiency throughout your operation. Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States, or write:

The Texas Company, 135 East 42nd Street, New York 17, N.Y.

## Lubricants and Fuels

FOR THE TRUCKING INDUSTRY



## Seasons Greetings

to all the loyal Sealed Power dealers, who have sold so many millions of Sealed Power Piston Rings—and to all the car, truck, and tractor owners who have used them during the 45 years since Sealed Power started.

SEALED POWER CORPORATION • MUSKEGON, MICHIGAN

# Sealed Power Piston Rings

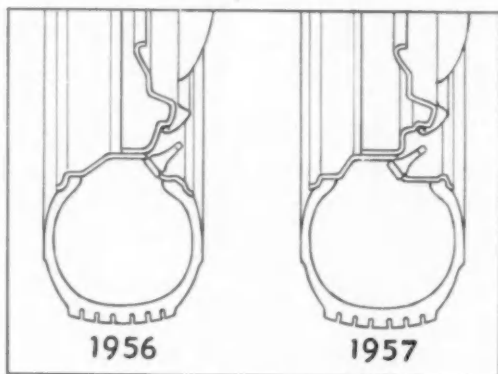
BEST FOR RE-RING!

BEST FOR RE-BORE!



**New 14-in. Tire Service**

**T**HE NEW shallow well construction causes an extremely tight condition when prying the bead over the rim in the new 14-in. tires. Therefore it is not recommended that these tires be removed by the hand-pry method. So little room is provided for slipping the bead over the rim



View at left shows 15-in. tire on 1956 model rim, right view is of new 14-in. tire on 1957 model rim

that serious damage may occur to both beads if they are forced off. In addition to the shallow well, many rims have been reversed so that the wide flat area is toward the hub or out-side of the wheel. This makes it impossible to mount or demount the tire by placing the rim on a tire changer in the conventional manner. These wheels must be serviced from the dash-side or inside only. Therefore this rim must be placed on the changer with the inside facing upward. If the bead is forced off the rim from the wide, flat side, extreme damage will positively result. Tires on Ford and Chevrolet must be changed from the inside of the wheel. In order to break the bead, the bead-breaker must be moved up the long flat side to punch the bead completely into the well. This will make some of the present tire-servicing equipment obsolete as this type will not push the bead completely into the well of the wheel. It is important that a good tire lubricant be used for both mounting and demounting of tires on 14-in. wheels. This mounting fluid is used to provide easy mounting and demounting and to eliminate any damage

to the vital air-seal beads on the 14-in. tubeless tires. Failure to use a lubricant may well result in destruction of the beads.

**Radiator Material Change**

**F**LEET OPERATORS may be interested to know that another advance has been made in the search for materials replacing hard-to-get copper and brass for radiators. A joint announcement made recently by McCord Corp. and Allegheny Ludlum Corp. indicates that type 430 stainless steel is being used in making radiator top and bottom tanks.

McCord is employing 430 material only 0.018 in. thick for these formations. In this gage, stainless steel is readily workable, is said to produce a structure superior in strength and rigidity to the heavier gage brass tanks with corrosion resistance, strength, and fabrication costs as good as with other materials available. Mercury has confirmed that it has authorized a small percentage of stainless steel top tanks in current production to prove the utility and economy of the material in service.

**Oil Consumption after Valve Job**

**U**SUALLY, when you run into increased oil consumption after a valve job, it is caused by the valve guides being worn. When the valves are removed and the stems cleaned, and the valve guides cleaned, the removal of the varnish from both valve stems and valve guides leaves quite a bit of room for the oil to be drawn up the intake valve stems. In most cases mechanics will check the end play of the valve before it is removed. This does not always give the true picture of the valve clearance due to the gum deposit on both surfaces. Care should be taken if abrasive paper is used not to have lengthwise scratches in the stem as this will induce oil flow also. As a suggestion, when doing any of these jobs either install new guides or install valve guide packing on the intake valves. Increased vacuum with worn guides will invariably make engine use more oil.

**How Much Lubrication?**

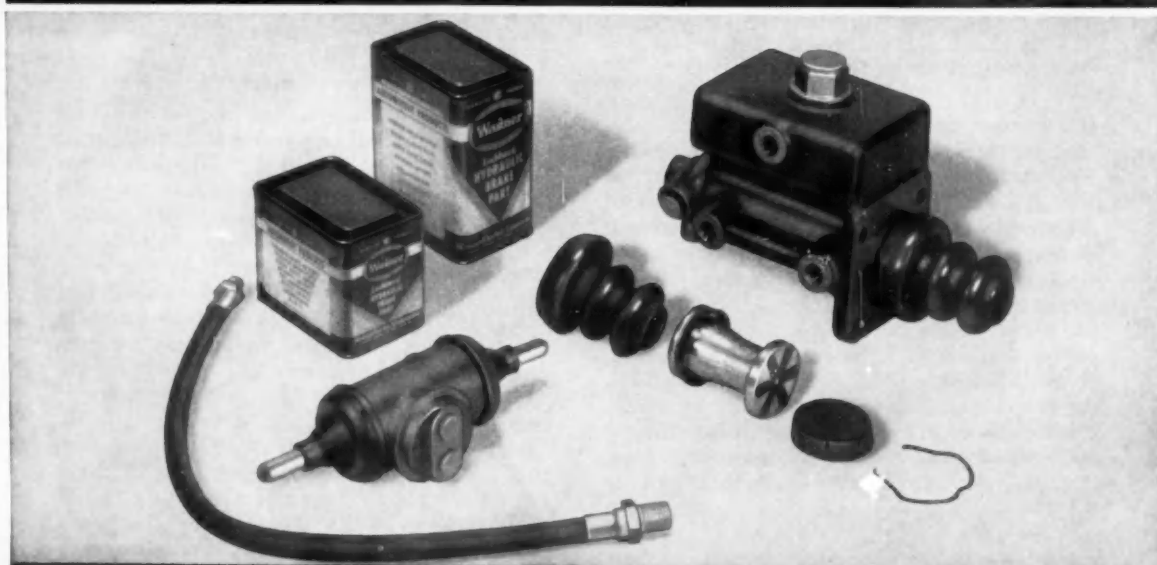
**A**CCORDING to the Anti-Friction Bearing Distributor Assn. an anti-friction bearing uses  
(TURN TO PAGE 12, PLEASE)



## Wagner's Rigid Quality Control means

*BETTER BRAKES...SAFER TRUCKS*

Wagner brake parts quality control inspectors check brake springs for a uniform thickness of two-thousandths of an inch . . . for uniform outside diameter and overall length measurements. Under a given pressure, a spring must compress a gauged distance or it is rejected.



Est.  
1891

# Wagner

*...the best known  
name in brake service*

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID • CoMoX BRAKE LINING • HoRoL • AIR HORNS • AIR BRAKES • TACHOGRAPHS • ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL CRANE BRIDGE BRAKES

# You can do a better job faster when you use

## **Wagner Lockheed<sup>®</sup>**

### **BRAKE PARTS**

whenever you install WAGNER LOCKHEED BRAKE PARTS, you can be sure  
they'll be exactly right for the job because at Wagner  
all brake parts must stand up to really tough inspections...

***THIS IS WAGNER RIGID QUALITY CONTROL!***

The extra care taken in the manufacture of *all* Wagner Brake Parts makes your maintenance work easier, and assures genuinely safe brakes. Even the smallest parts are given careful tests.

BRAKE RETURN SPRINGS, for example, are very important to good brake operation. The master cylinder return spring keeps air from being sucked into the braking system after the driver's foot leaves the pedal. Wheel cylinder return springs must maintain uniform pressure at each wheel to allow the brakes to work together. *All* Wagner brake springs are exactly right for their job because they all have to meet the same high standards.

The Wagner line of hydraulic brake parts is the most complete on the market. Every make and model vehicle is covered. Parts are available individually or in factory sealed kits. You can depend on WAGNER QUALITY because Wagner products are used as original equipment by manufacturers of cars, trucks, buses, and trailers.

### **Wagner Electric Corporation**

(Branches in principal cities in U. S. and in Canada)

#### **WAGNER ELECTRIC CORPORATION**

6470 Plymouth Avenue, St. Louis 14, Mo., U. S. A.

Please send me a free copy of Hydraulic Brake Service Guide HU-411.  
I understand there is no obligation.

NAME \_\_\_\_\_

FIRM \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY, ZONE & STATE \_\_\_\_\_

P56-48



# 6¢ worth of detergent to clean this truck

... says dairy  
using Oakite Foam Spray Unit

Recently, a North Carolina dairy decided to go modern in its truck-cleaning operation. It switched from the old bucket-and-brush method to Oakite Foam Spray cleaning, with Oakite Composition No. 70 as detergent. Here is what this dairy reports:

**CLEANING TIME CUT.** Start to finish, it takes only 15 minutes to bring a soiled truck to sparkling clean condition.

**DETERGENT COST CUT.** Using an 8 oz./gal. solution, cost of O.C. 70 is less than 6¢ per truck. Reason: powerful O.C. 70, sprayed on as a lather by Oakite's Foam Unit, clings like a leech to sides of truck. No wastage by drip to ground, no wastage between brush and bucket.

And best of all, reports this dairy, trucks come through the fast, low-cost wash looking better than ever,

Your local Oakite Service man will show you how to do a faster, better fleet-washing job at less cost. Call him. Or, for more information on modern truck cleaning methods, write for Booklet F9254 to Oakite Products, Inc., 52G Rector St., New York 6, N. Y.



Oakite Foam Spray Unit, special tool developed for fleet-washing the modern way.



Export Division  
Cable Address: Oakite

Technical Service Representatives in Principal Cities of U. S. and Canada

## CCJ AT YOUR SERVICE

Continued from Page 9

very little lubricant and, when it is over-lubricated, the bearing runs hot. In fact, bearings often run with a higher temperature from too much lubricant than from not enough. With grease, housings should preferably be filled not over  $\frac{1}{3}$  to  $\frac{1}{2}$  full—so that the grease level will be just high enough for the lower sections of balls to pass through. If housing is too full, there is a tendency for the soft grease to churn, which results in heat from the internal friction. Where oil is used, its level should never be above the center of the lowest ball.

### Tar Removers

**M**ORE DETAILS on the use of tar removers on vehicles finished with acrylic-type lacquers (Nov., page 9) come from the DuPont Co. Says DuPont, it was reported last May at the Chemical Specialties Manufacturers Assn. that acrylic lacquer may be softened and dulled by aromatic hydrocarbons but not by aliphatic hydrocarbons. Problem then in formulating solvents is to blend the aromatics with the aliphatics so that the aromatic proportion does not increase to a harmful degree as the solvent evaporates. DuPont says its "Dissolvo" tar remover, announced last February, meets this test.

### Charge Indicator Lights

**M**ANY OF the late model vehicles are using charge indicator lights in place of the familiar ammeter, and, while they are simple in operation, some service problems have arisen from their use that deserve an explanation. When the ignition switch is closed, battery voltage is available to the indicator light. A completed circuit to ground is through the generator armature and the grounded brush. Therefore, with the ignition switch closed, whenever generator voltage is below battery voltage, current will flow through the light and go to ground through the generator causing the light to glow.

However, in addition to the generator's voltage having to be less than the battery's voltage to light the light, it is also necessary that the cut-out points be open. When the cut-out points are closed, another circuit is completed between the battery and the generator. This is the main charging circuit, and as soon as the cut-out points close the warning light is by-passed by this circuit. Thus in normal operation whenever the cut-out points are closed the light will go out.

Whenever generator out-put falls sufficiently below battery voltage—such as at idle or when

(TURN TO PAGE 16, PLEASE)





## EXTRA MILEAGE AT NO EXTRA COST

Lee Super DeLuxe Highway Tire is built to take extra recaps, too!

Here is a *regular-price* truck tire that is making original mileage and recap records all over the country.

The Lee Super DeLuxe Highway has a wide, flat-contour tread compounded of best grade Smoked Sheet natural rubber for maximum mileage. The tread design provides excellent traction and is engineered to prevent small cuts from growing into long tread cracks.

Its carcass has Lee's special Lubri-Cushions — thin sheets of rubber between every ply. These lubricate the plies, reduce internal friction, and protect against bruise breaks by equalizing flexing strain over the entire road impact area.

Extra-strong, extra-tough Super-Tensile Cord assures greater protection against impact damage and blowouts. The cords are all treated by the exclusive Lee Flexlok Process, which minimizes tire growth and makes cord separation from the rubber bond practically impossible.

The Lee Super DeLuxe Highway is available in Super-Tensile rayon or nylon cord. It's an outstanding truck tire buy.

The complete Lee line, shown below, includes a tire which will lower *your* operating costs by giving longer life, more recaps. Let us prove it to you.





*The Alcan test run was supervised and certified by the AAA.*

*Never-say-die dependability proved*  
**NEW TASK•FORCE 57**



Six new '57 Chevy trucks tamed the rugged  
Alcan Highway in one round-the-clock sprint.  
They covered the grueling run in less  
than 45 hours (normally a 72-hour run)!

Up towering grades, through washouts, blinding dust and pounding gravel—these heavily loaded Task-Force huskies took everything the Alcan could dish out, and still they trimmed almost 30 hours off the normal running time! As a special test, two of the engines were not stopped once during the entire trip. Gas mileage ranged up to 18.17 miles per gallon! A Powermatic-equipped

heavyweight went all the way in a single forward-speed range! "Despite the severity of the test under the most adverse road conditions," states the official AAA report, "not a single truck turned back or dropped out due to mechanical failure." Put an Alcan-proved Chevrolet truck to work on your job! . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

*on the Alcan Highway!*

# CHEVROLET TRUCKS

## NO JOB TOO TOUGH FOR THE ALCAN CHAMPS!

Whether your job calls for fast-working efficiency against tight schedules or big muscles for off-the-road grinds—there's an Alcan-proved Chevrolet Task-Force truck ready to save you time and money!



## DROP BY YOUR CHEVROLET DEALER'S SOON.

Look over his new Task-Force line for '57. You'll spot the modern features that put new Chevy trucks way out in front. You'll see right off why they're first choice with most truck buyers!



PROVED ON THE ALCAN HIGHWAY . . . CHAMPS OF EVERY WEIGHT CLASS!

**CHEVROLET**

# Maintenance Problems Licked

at new low cost



**the most economical  
unit on the market!**

low, low initial cost . . .  
only \$359 f.o.b. factory

low, low operating cost . . .  
uses half as much fuel.

Outperforms big, costly  
machines where a  
handy steam cleaner is  
needed. Pressure  
impact of hot cleaning  
solution penetrates  
smallest cracks and  
crevices. Permanent

mount or  
(optional at  
small additional  
cost) portable  
on rubber  
tire wheels.

*cleans, sterilizes, disinfects, heats,  
sprays . . . practically anything!*

## Vapor Heating Corporation

80 East Jackson Boulevard, Chicago 4, Illinois, Dept. L-8

Send me bulletin No. 442 containing full details about  
the new Vapor "45" Steam Cleaner.

Name \_\_\_\_\_ Position \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

# CCJ AT YOUR SERVICE

Continued from Page 12

the engine is turned off—the cut-out points open and the light will again glow indicating that the generator is not charging.

Failure of the tell-tale light to glow when the ignition switch is closed could be caused by a burned out bulb or defective circuitry. The bulb should be removed and tested. If the light bulb is not burned out, turn on the ignition switch (do not start the engine), and test the circuitry by connecting a voltmeter from the center contact of the bulb socket to ground. Battery voltage should be obtained.

If no voltage at light socket, it indicates that current is not reaching the light. Using the voltmeter check voltage back through the circuit. For example: Test voltage on light side of the ignition switch. If voltage is available at that point, the wire between the ignition switch and the bulb socket is broken. If no voltage is indicated at light side of switch then test on battery side of the ignition switch, etc., back through the circuit until defect is located.

If voltage is available to the light socket, it indicates that the circuit to ground through the generator is open. Replace the bulb, and, using the voltmeter, test for voltage at the armature terminal at the regulator. If no voltage at this point the wire from the bulb socket to the regulator is open. If voltage is obtained at the regulator, test at armature post of the generator, etc., and on through generator to ground, if necessary, to locate defect.

When the light stays on all of the time it usually would indicate that the generator is not charging. Normal complete tests of the charging system would uncover the trouble. However, one further possibility peculiar to this system would be a ground between the light and the armature terminal of the regulator. This would ground out the armature circuit and for all practical purposes would reduce generator output to zero. In normal tests it would appear that the generator was defective because of the lack of output. If this possibility is suspected, disconnect the indicator light wire from the armature terminal of the regulator and repeat the generator output test. If generator now has output, the wire is grounded and should be repaired or replaced.

Some complaints have been encountered of tell-tale lights that faintly glow even though the generator is charging and the cut-out points are closed. This condition may lead to a discharged battery or a weakened ignition system and should

(TURN TO PAGE 20, PLEASE)





**"Joe used to keep her in stitches. Now all he talks about  
is his full-depth Airfoam truck seat!"**

Airfoam-T.M. The Goodyear Tire & Rubber Company, Akron, Ohio

**How full-depth AIRFOAM seats ►  
increase driver-efficiency, cut costs:**

You can specify Full-Depth  
AIRFOAM seats and backs as  
original equipment on any truck!  
But be sure it's



**Airfoam**  
MADE ONLY BY  
**GOODYEAR**

**The World's Finest, Most Modern Cushioning**

COMMERCIAL CAR JOURNAL, December, 1956

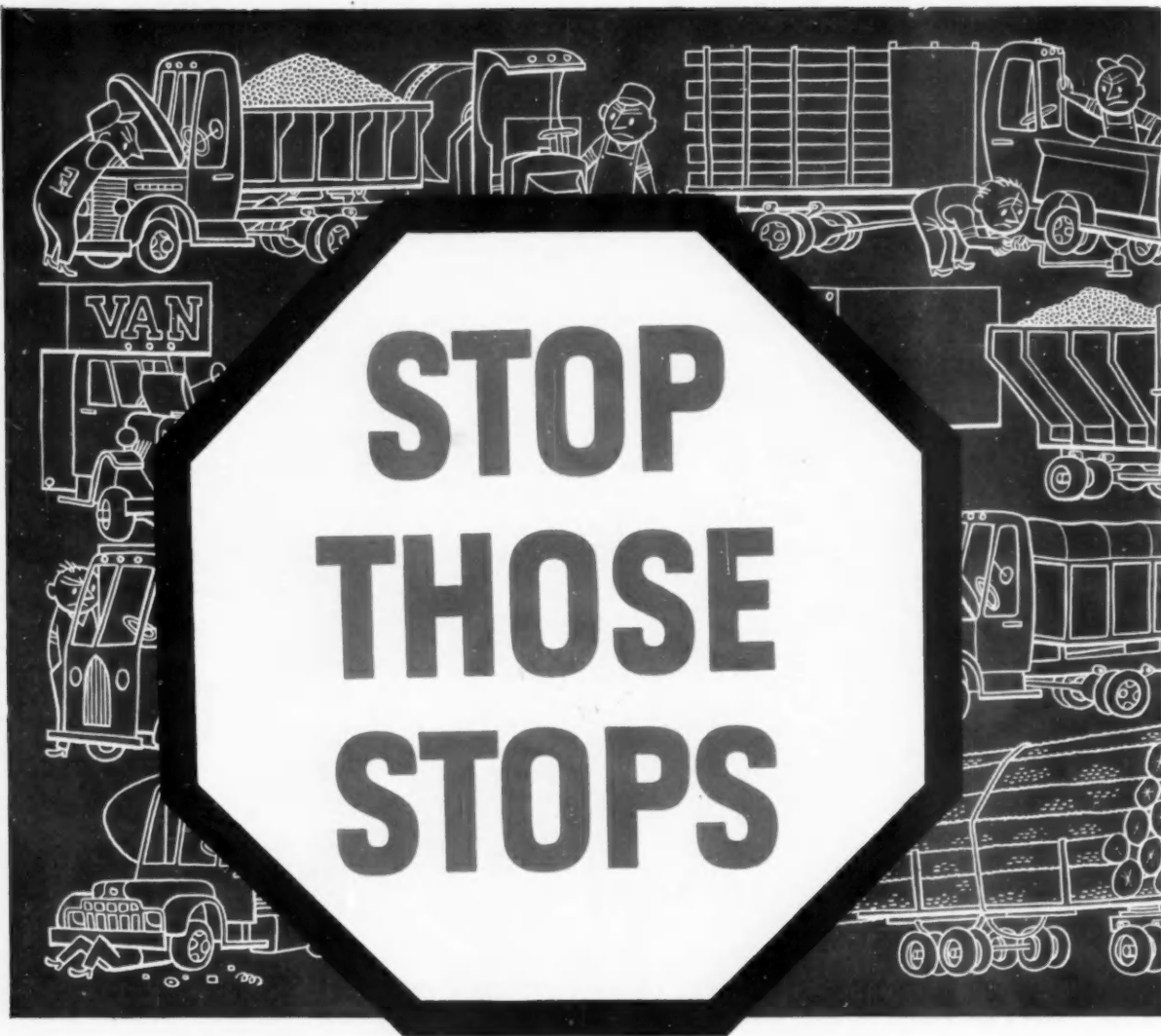


**MULTIPLE-EXPOSURE PHOTO** showing how ordinary cushions amplify drags and jars, cause driver to bounce up as controls come down. Trying to compensate, driver cramps muscles, frazzles nerves, drains efficiency. Cushions wear out, too!



**SAME CAB. AIRFOAM** (with over half-a-million fresh air cushions per cubic inch) muffles and absorbs drags and jars, keeps driver's motion in step with controls. Result: Fresher, happier, more efficient drivers—plus undamaged cushions!

Goodyear, Automotive Products Dept., Akron 16, Ohio



**Use these proved  
Socony Mobil aids  
to help keep  
your fleet going !**



**FAMOUS QUALITY PRODUCTS —**

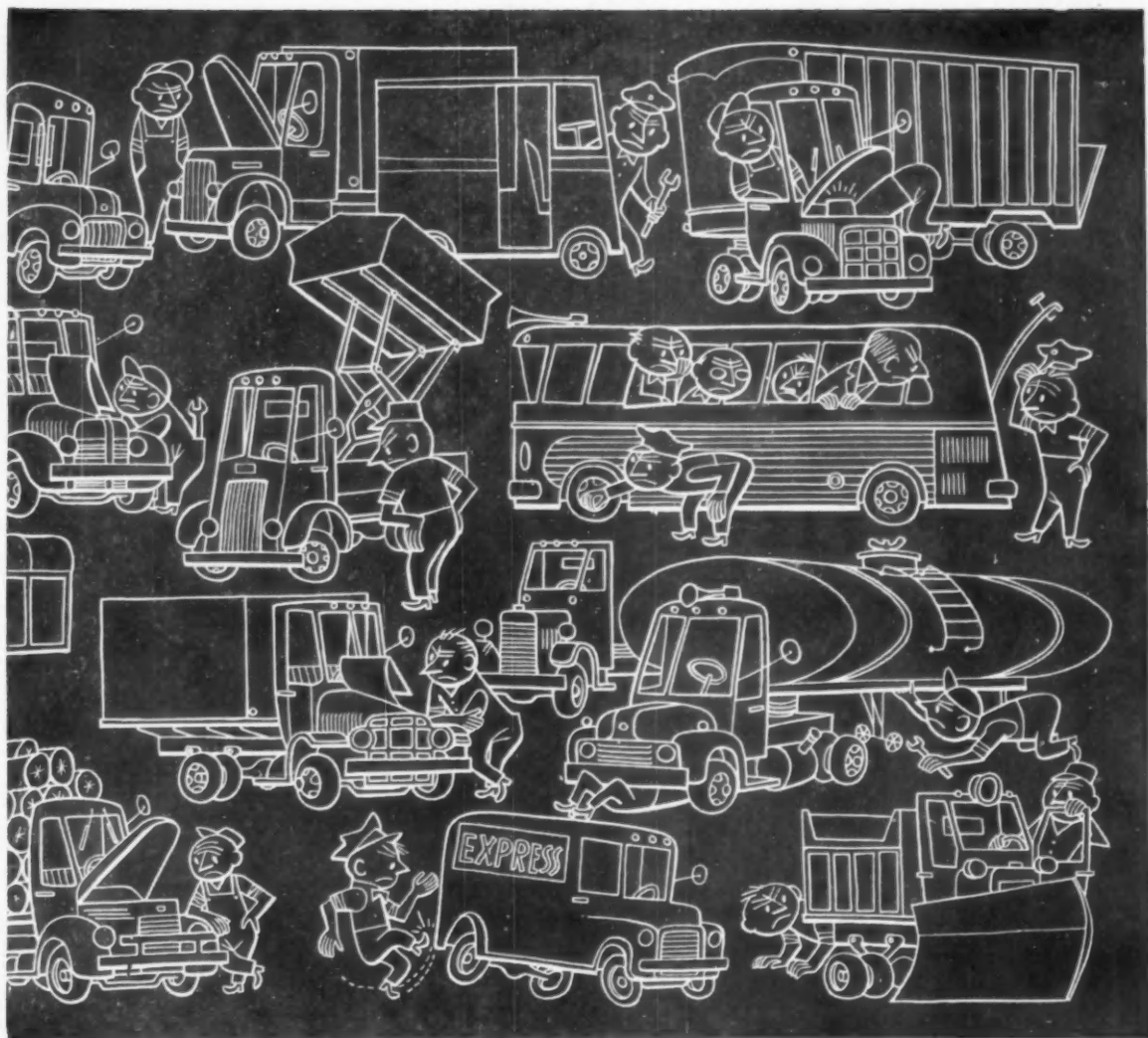
**Delvac Oils** — for all gasoline and automotive Diesel engines.

**Mobilube GX** — multi-purpose gear lubricant for all enclosed gears — manually operated transmissions, transfer cases, final drives.

**Mobilgrease** — types and grades for correct lubrication of all chassis parts, engine accessories.

## **CORRECT LUBRICATION**

THE FLYING RED HORSE COMPANIES: SOCONY MOBIL OIL CO., INC.,

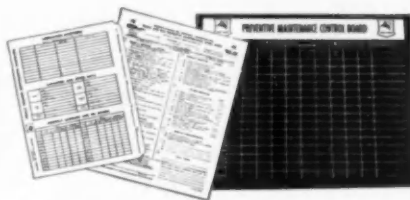


#### LUBRICATION ENGINEERING SERVICE—

2

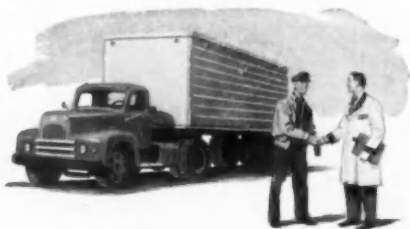
We will analyze your fleet conditions, advise on lubrication schedules and inspection periods. We also provide the services of expert lubrication engineers when necessary, give you progress reports of benefits achieved. Our research laboratories — our 89 years' experience — are all at your service!

3



#### SIMPLIFIED P.M. SYSTEM—

Just three things to work with — record folder, work sheet, control blackboard. We supply folders, work sheets — show you how to use them — help you set up entire system. It's simple, foolproof, profitable — helps reduce wear, repairs, breakdowns . . . cut maintenance costs to the bone!



## FOR FLEET OPERATORS

MAGNOLIA PETROLEUM COMPANY, GENERAL PETROLEUM CORPORATION

COMMERCIAL CAR JOURNAL, December, 1956

Continued from Page 16

not be ignored. If excessive resistance should develop through oxidation of the cut-out points, poor connections, defective wires, or a worn or over-loaded ignition switch this would cause a substantial voltage drop and a considerable difference in the potential or voltage applied on one side to the other side of the light.

Locating the source of excessive resistance can be quickly accomplished using a voltmeter. Start the engine and run the generator at a sufficient speed to cause the light to glow. If the speed required is excessive before the light will glow, turn on the various accessories wired off the ignition switch which might cause the light to glow at a reduced engine speed. With the light glowing attach a voltmeter, observing polarity, as follows:

Connect voltmeter from battery side to the light side of the ignition switch. The voltmeter reading obtained will be the voltage drop across the switch. If the voltage drop is substantial repair or replace the switch as required to eliminate the drop. (In some cases of an overloaded

switch, some of the accessories operated off of the ignition switch may have to be removed or operated by a relay.)

Check wire from the ignition switch to the starter switch—or junction block on some vehicles—in the same manner. If voltage drop exceeds 0.2 volt, repair or replace wire as required. In some cases a heavier gage wire may have to be used.

Check wire from the starter switch to the battery terminal of the voltage regulator. Repair or replace wire if the voltage drop exceeds 0.2 volts.

To test the resistance across the cut-out points and internal resistance in the regulator attach voltmeter leads from the battery terminal of the regulator to the armature terminal of the regulator. If voltage drop exceeds 0.2 volt, service the cut-out points following the manufacturer's recommended procedure.

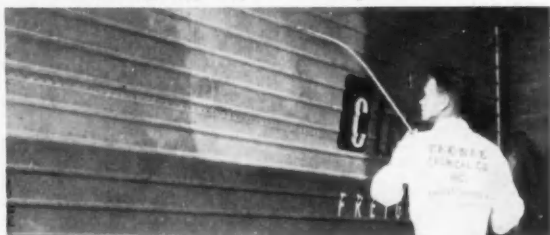
The indicator light could work normally, going out with a raise in generator charging voltage. However if the cut-out points failed to close, the battery would not receive any charge and soon would become discharged. The reason the light operates normally is similar to the explanation of the glowing light. Generator voltage would be applied to the generator side of the light and battery voltage would be applied to the ignition switch side of the light. The effective voltage or

(TURN TO PAGE 24, PLEASE)



## How to Improve Truck Maintenance

With CEE-BEE's 1-2-3 Brightening Method.  
Easy Low-Cost Maintenance No tie-up of rigs... No large crews.



- 1 CEE BEE brightening is applied with low pressure spray or brush. Starts to work immediately.  
CEE-BEE washing is fast and effective. It removes all smoke streaks, road film, and oil stains without harm to painted surfaces. Stops corrosion, too... virtually eliminates costly aluminum skin replacement.

And, your CEE-BEE brightened trailers will have a bright, clean, new look that will reflect the reputation of your company.

Your nearest CEE-BEE representative will help you set up an effective washing and brightening schedule. Write for brochure and list of representatives.

**CEE-BEE**

CEE-BEE CHEMICAL CO., INC. 9520 E. CEEBEE Drive, Downey, Calif.



- 2 Complete coverage is accomplished with hand brush. No scrubbing is necessary.



- 3 Rinse away brightener with water. Leaves a clear brightened surface that needs only to air dry.



# "THANKS TO KRAFT®

*we're a million miles better off!"*



President of the 150-unit fleet bearing his name, Mr. Arthur A. Fogarty credits KRAFT with reduced tire costs ... minimized delays in over a million miles of service.



Like Arthur A. Fogarty Transportation, Inc., Springfield, Mass., hauling throughout the Northeast for one of the country's largest grocery firms, hundreds of mileage-minded fleet operators are turning to KRAFT System Recapping.

Offering guaranteed service coast-to-coast, the KRAFT System is a quality-controlled, business-like operation that specializes in producing extra profit-mileage for truckers everywhere.

For detailed information on every tire and recapping need, get in touch with your local General Tire distributor.

## Only Kraft gives you all 4

- 1 Extra long-mileage, top-quality materials
- 2 Factory approved equipment
- 3 Factory trained retreaders
- 4 Guaranteed service coast-to-coast



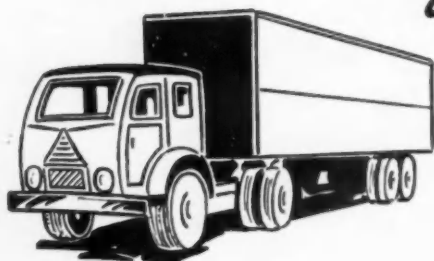
KRAFT SYSTEM RECAPPING IS AUTHORIZED ONLY BY THE GENERAL TIRE & RUBBER COMPANY



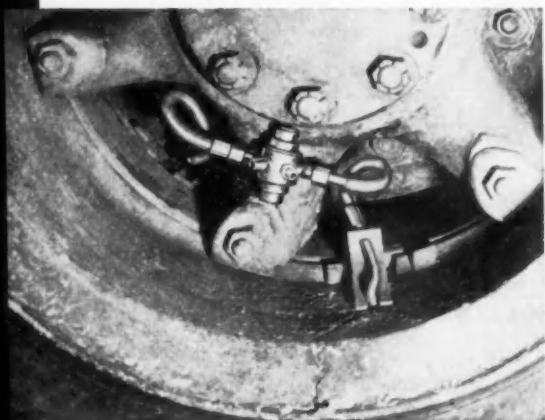
# *the* **CARLAN VALVE**

for DUAL TIRES

*Guarantees . . .*



- SAFER DRIVING CONDITIONS
- MORE MILEAGE ON ALL DUALS
- REDUCED COSTLY ROAD SERVICE
- BETTER AND SAFER RECAPS
- UNIFORM LOAD DISTRIBUTION
- UNIFORM WEAR
- MORE TRACTION FOR BETTER BRAKING



The photo on the left shows the application of the Carlan Valve and also shows safety clip provided to prevent valve stem from dropping into casing. The Carlan Valve is designed so that if either of the 2 connecting hoses becomes severed, or either tire goes flat, operation automatically ceases with no loss of air. These valves are pre-adjusted to any desired operating pressures. The valve requires no maintenance, it's self contained and is always in operation. It has two checking stations so as to determine pressure in each tire.

The photo at right shows a pair of duals with uneven wear, this is the result of running without the Carlan Valve. The other pair shows uniform wear with Carlan Valve application. The application of the Carlan Valve speeds up tire checking methods without guessing. When ordering please state your operating pressures.



SEND FOR CATALOG SHEET

**CARLAN** INSTRUMENTS COMPANY INCORPORATED  
1375 PARK AVE. • CRANSTON 9, RHODE ISLAND • TEMPLE 1-4906

Another reason why Kwik-Way machines last longer, assure precision

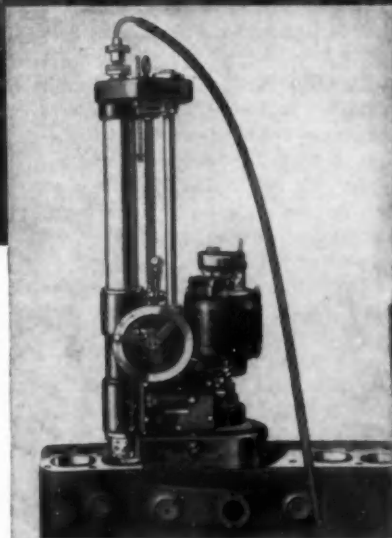


## Removing $\frac{1}{10,000}$ th inch of metal by hand

The critical surfaces of every Kwik-Way machine are hand scraped. An important reason why Kwik-Way Cylinder Boring Machines produce true, straight cylinder walls completely free from taper. *Only hand scraping by expert craftsmen* can insure that the base of the machine will make a perfect right angle to the center line of the boring sleeve. Often the amount of metal removed by this process measures no more than one ten thousandth of an inch. But this tiny fraction of an inch can mean the difference between turning out an average job and a precision Kwik-Way job.

Perfectly true master plates are covered with Prussian Blue, then placed against the surface to be leveled. The Blue transfers to the high spots. These spots are hand scraped, and this process is repeated until the Blue from the master plate evenly covers the surface to be leveled.

One of the many reasons why Kwik-Way Cylinder Boring Machines are unmatched for precision.



### Kwik-Way Cylinder Boring Machines—for easy set-up, fast operation, precision results.

- Overhead chip removal with Vortex exhaustive device.
- Screw feed with automatic retraction.
- Three finger centering for maximum accuracy.
- Rigid construction — no additional supporting devices necessary.
- Quick, easy, accurate tool setting eliminates "sense of feel."

Precision - Speed - Long Life

**Kwik-Way**  
Engine Reconditioning Equipment

Write today for illustrated brochure  
**CEDAR RAPIDS ENGINEERING CO.**  
912 17th Street, N.E.  
Cedar Rapids, Iowa



## CHASSIS SERVICING no problem

on

## BOYERTOWN Merchandisers

BOYERTOWN "Better Built" MERCHANDISERS are designed to provide the MAINTENANCE MAN with a maximum engine and transmission accessibility from both the front of the truck as well as in the cab area.

As indicated below, the entire engine and transmission can be exposed for service or replacement by simply removing several fasteners from the motor cover and toe boards.

This fast, convenient accessibility means less "Shop Time", more efficient servicing and to the Owner, lower operating cost.

Ask your Dealer about BOYERTOWN'S complete line of over 14 basic "Better Built" body models and sizes for the chassis of your choice. Learn of the many more body features of BOYERTOWN delivery bodies.

MERCHANDISER engine cover and cab floor access doors. The broken line indicates additional floor plates which can be removed quickly for greater accessibility to the engine and transmission.



For complete information, write, phone or visit:



## CCJ AT YOUR SERVICE

Continued from Page 20

difference in voltage between the two sides might not be enough to flow sufficient current through the light to make it glow. It is possible in some cases to have a slightly glowing light as discussed in the preceding paragraph instead of the light going completely out.

If a battery is installed with reverse polarity, the indicator light will operate normally and will in no way indicate that the battery is installed incorrectly. After installing a battery, if any doubt exists, it is recommended to check installation with a voltmeter before starting engine to avoid damage to regulator.—Sun Electric.

### Steering Geometry Review

EASE OF steering, riding comfort and life of equipment are all affected by front wheel alignment. Caster, camber, toe-in and king pin angle should be checked regularly and especially following heavy impact or severe strain at the front end. Precision equipment is necessary for accurate inspection work. Here's a handy review of the problems involved:

**Caster** is the angle in degrees that the top of the front axle is tilted toward the rear of the vehicle. It tends to hold the wheels in a straight forward position and lends a tendency to straighten out after a turn. Caster must be alike on both ends of the axle. Any variation changes the relative toe-in of the front wheels, causing one to scuff or drag more than the other. Caster angle is engineered into the spring seat. Tendency toward zero or negative caster can usually be traced to broken springs, dislocated springs, loose "U" bolt or spring clips. Slight differences in caster between the two sides can usually be corrected with tapered shims between the axle center and the spring.

**Camber** is the angle in degrees that the front wheels are tilted outward at the top measured from the vertical. It offsets deflection and wear of axle parts. Variations in camber on opposite wheels cause a different degree of toe-in on each wheel, result in rapid tire wear and shimmy. Camber is engineered into the axle center and spindle. Improper camber can be corrected by replacing worn or damaged parts or by straightening bent parts.

**Toe-in** is the amount that front wheels are closer together at the front than at the rear, offsets the effects of caster and camber on tire wear. Adjustment is made at the threads in the tie rod ends when necessary.

# "Road-testing" tougher than any road assures longer TIMKEN® bearing life



*(Another reason why TIMKEN® bearings are first choice with truck manufacturers)*

WORKING hand-in-hand with the truck industry solving basic design problems, we "road-test" bearing applications in our own laboratories. And we do it under simulated road conditions tougher than any encountered in actual service. Pictured here is a typical service test—running a front axle assembly under maximum driving loads. It tests the bearings themselves, compares seals and lubricants, shows bus and truck manufacturers how to get longer bearing life. It's one of the extra steps we take to make Timken® tapered roller bearings No. 1 for value.

No other bearing gives you all the advantages that Timken bearings give you: 1) advanced design, 2) rigidly controlled quality, 3) precision manufacture, 4) special analysis Timken steels. That's why Timken bearings are first choice with men who know trucks best—truck manufacturers.

Why not take your cue from the manufacturers. Make sure the bearings you use for replacement carry the trade-mark "Timken". And send today for your free copy of "Timken Tapered Roller Bearings—Their Care and Maintenance". Write Dept. JCC-12, The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

## SINCE THEY'RE BEST WHEN THE TRUCK IS NEW, THEY'RE BEST FOR REPLACEMENT, TOO!



**TIMKEN**  
TRADE-MARK REG. U. S. PAT. OFF.  
**TAPERED ROLLER BEARINGS**

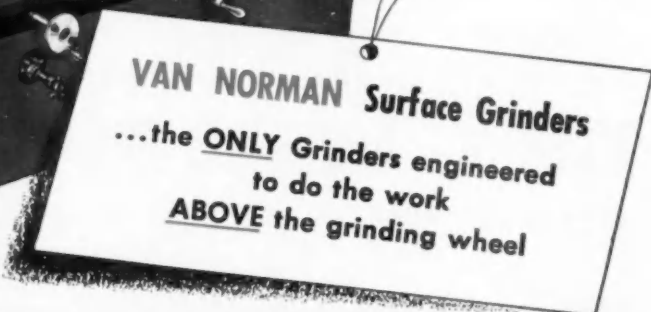
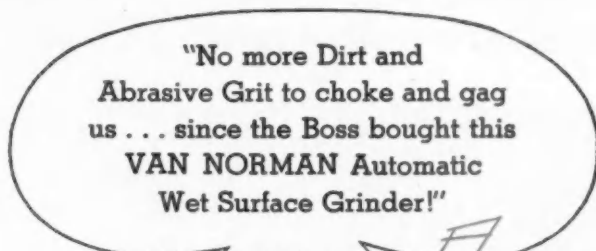
NOT JUST A BALL ○ NOT JUST A ROLLER □ THE TIMKEN TAPERED ROLLER  
BEARING TAKES RADIAL ⊥ AND THRUST →--LOADS OR ANY COMBINATION ⊗

# NO MORE GRIPES!

**from WATER PUMPS and  
MOTOR BEARINGS...**

All parts and precision surfaces are protected by the exclusive Van Norman feature of placing the grinding wheel *below* the work. Dirty, abrasive-laden coolant does not pass over the work. This . . . plus the other Van Norman exclusive feature of built-in loading table to give fastest set-up on all types of heads, manifolds and blocks . . . makes Van Norman the top money-maker on the most-asked-for job in the whole field of automotive service . . . cylinder-head resurfacing, scored 3 to 1 over any other job.

Surveys show more jobbers bought more head, block and manifold automatic wet grinders last year than any other equipment . . . *and that they bought more Van Norman machines than any other.* Write for special brochure on 4 models now available from 38" to 60" capacity. Van Norman Automotive Equipment Co., Springfield 7, Mass.



**The Best Equipped Shop is the Van Normanized Shop**



## Phony Fables about Oil Seals



### Fable No. 1

#### Always send out when you need new oil seals

OK, if you prefer. But it saves travel, and cuts down-time if you stock needed seals in your shop.

It's easy and inexpensive. Your parts supplier inventories your equipment, and suggests a stock custom tailored to your needs. He maintains it, revises it as you change units; no extra work for you. In addition, you enjoy price advantages as a stocking fleet shop.

Leading fleets agree with equipment manufacturers that it's the best practice on repairs as well as on Preventive Maintenance inspection to install new seals whenever old ones are removed. Make this easy for your shop; note it down *now* to "call parts house about National Oil Seal service stock."

You can be sure National Oil Seals are perfect replacement, since National makes original equipment seals for every make of truck and car, and most other vehicles.



Support this  
industry-wide  
program



### NATIONAL SEAL

DIVISION, Federal-Mogul-Bower Bearings, Inc.

11031 Shoemaker Avenue, Detroit 13, Michigan

PLANTS: Van Wert, Ohio and Redwood City, California

### Another Phony Fable:

#### Any seal that fits is right!

Wrong! Thousands of dollars and months of engineering go into original equipment seals NMB provides for trucks, buses and cars. Then vehicle manufacturers road test to be sure perfect sealing is achieved. A hundred seals may fit the bore. But only the right one—accurately engineered and quality made—will seal properly. Don't chance it—insist on perfect fit National Oil Seals.



### NATIONAL

OIL & GREASE SEALS

O-RINGS



SHIMS

Approved original equipment for all cars, trucks, buses and tractors.

# DATES and DOINGS

## DECEMBER

8-16—National Auto Show (including truck exhibits), Coliseum, New York, N. Y.

## JANUARY

5-13—Auto Show (including truck exhibits), International Amphitheater, Chicago, Ill.  
6-10—National Wholesale Frozen Food Distributors Assn., Convention and Exposition, Fontainebleau Hotel, Miami Beach, Fla.  
14-18—Society of Automotive Engineers, Annual Meeting, Sheraton-Cadillac and Statler Hotels, Detroit, Mich.  
19-23—Truck-Trailer Manufacturers Assn., Annual Convention, Hotel Del Coronado, Coronado, Cal.  
22-24—American Transit Assn., Region VI Meeting, Hotel Galvez, Galveston, Texas.  
23-24—Executive Committee, American Trucking Assns., ATA Bldg., Washington, D. C.  
27-Feb. 1—Regular Common Carrier Conference, American Trucking Assns., Board of Governors Meeting, Miami Beach, Fla.  
31-Feb. 1—Private Truck Council of America, Annual Convention, Sheraton-Jefferson Hotel, St. Louis, Mo.

## FEBRUARY

2—Louisiana Motor Truck Assn., Annual Convention, Jung Hotel, New Orleans, La.  
4-6—Industrial Relations Committee, American Trucking Assns., Roney Plaza Hotel, Miami Beach, Fla.  
4-7—Automotive Accessories Manufacturers of America, Annual Exposition, New York Coliseum, New York, N. Y.  
7—Allied Transportation Industries Assn., Hotel Syracuse, Syracuse, N. Y.  
14—Empire State Highway Transportation Assn., Hotel Statler, New York, N. Y.  
27-28—American Transit Assn., Region I Meeting, Hotel Statler, Boston, Mass.

## MARCH

5-7—American Transit Assn., Region IV Meeting, Henry Grady Hotel, Atlanta, Ga.  
5-7—Society of Automotive Engineers, National Passenger Car, Body and Materials Meeting, Sheraton-Cadillac Hotel, Detroit, Mich.  
7-10—Pacific Automotive Show, Civic Auditorium, Seattle, Wash.

## APRIL

4-7—Southwest Automotive Show, Automobile Bldg., Fair Park, Dallas, Texas.  
7-10—Western Highway Institute, Annual Meeting, Arizona-Biltmore Hotel, Phoenix, Ariz.  
8-12—American Welding Society, Spring Meeting, Hotel Sheraton, Philadelphia, Pa.  
8-12—Welding and Allied Industry Exposition, Convention Hall, Philadelphia, Pa.  
25-27—International Automotive Exposition, Dinner Key Auditorium, Miami, Fla.

## MAY

5-9—Operations Council, American Trucking Assns., Annual Meeting, Hotel Commodore, New York, N. Y.  
9-12—Midwest Automotive Show, Kiel Auditorium, St. Louis, Mo.  
13-15—Automotive Engine Rebuilders Assn., Annual Convention, Sheraton-Cadillac Hotel, Detroit, Mich.  
20-24—Regular Common Carrier Conference, American Trucking Assns., San Francisco, Cal.  
23-26—National Automotive Service Show, Commonwealth Armory, Boston, Mass.  
28-June 2—Local Cartage National Conference, American Trucking Assns., Annual Convention, Edgewater Beach Hotel, Chicago, Ill.

## JUNE

2-7—Society of Automotive Engineers, Summer Meeting, Chalfonte-Haddon Hall Hotel, Atlantic City, N. J.  
19-20—Executive Committee, American Trucking Assns., ATA Bldg., Washington, D. C.

# more miles per dollar!

## Bendix\*

## ELECTRIC FUEL PUMP



for trucks, buses  
and  
passenger cars

Learn more about this new and improved fuel pump.  
Write for descriptive folder and specifications.

\*REG. U. S. PAT. OFF.

WRITE DEPARTMENT 8

ECLIPSE MACHINE DIVISION ELMIRA N. Y.

**Bendix**  
AVIATION CORPORATION

## "KAY LAB" FOR DEPENDABLE QUALITY PRODUCTS

KAY LAB is repeatedly the choice with every City, County and State government requiring flashing lights on emergency vehicles because only Kay Lab has the features specified.



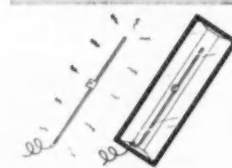
### "STOP-IT" SAFETY FLASHER

Finest flasher made. Makes lights flash on and off. Used for flashing warning signals and directional signals. Available in 4 types. Will flash any auto lamp to 64 candlepower, 5 amperes, standard ratings 6 or 12 Volts.



### ALTERNATING FLASHER

HEAVY DUTY. Meets requirements of State Laws for alternating flashing signals. Up to 15 amperes, 6 or 12 Volts. No parts to wear out; requires no lubrication, no upkeep. Operates magnetically. Good for lights or horn signals.



### MIRROR DEFROSTING ELEMENT

Assures maximum visibility in any weather. Fits all outside mirrors having 1 1/2" space between mirror and back. Easily installed in 30 minutes. Nothing to wear out. Tremendous Safety Factor.

Write for Folders, prices and name of nearest Jobber

## MACCHI & COMPANY

819 Valencia Street, San Francisco 10, Calif.

# B.F. Goodrich



## Traction Express tires give up to 50% more miles before recaps, trucker reports

**L**EE WAY MOTOR FREIGHT owns and operates 225 tractors, 450 trailers and 200 pick-up trucks out of Oklahoma City, Oklahoma. These units work 9 hours a day, 6 days a week hauling freight throughout the southwest.

When it comes to tires, Lee Way chooses the B. F. Goodrich Traction Express. Those pictured above have traveled 107,000 miles—nearly 50%

more than other makes—and are not ready for recapping yet. Lee Way reports no tread cracking, better traction and more recaps with Traction Express tires.

B. F. Goodrich builds the Traction Express with a tread that's up to 46% thicker than that of a regular tire. Curved cleats grip the road, defying dangerous skids. Under the tread you

can get the B. F. Goodrich *all-nylon* cord body. Nylon withstands double the impact of ordinary cord materials, resists heat blowouts and flex breaks. An *all-nylon* Traction Express body outwears even the extra-thick tread, *can be recapped over and over!*

The Traction Express, called "the 100,000-mile tire" by truckers, comes in *all-nylon* or rayon construction. See it at your B. F. Goodrich retailer's, or write: B. F. Goodrich Tire Company, A Division of The B. F. Goodrich Company, Akron 18, Ohio.

### FREE SAFETY REFLECTOR

when you join the Safe Driver League  
Sponsored by B. F. Goodrich

Sign the safe driving pledge at your B. F. Goodrich retailer's. Show the President's Committee for Traffic Safety you're out to make our highways safer.



LEE WAY uses B. F. Goodrich *all-nylon* Heavy Duty Express tires as well as Traction Express tires on its 875-unit fleet.

Specify B. F. Goodrich tires when ordering new trucks or trailers

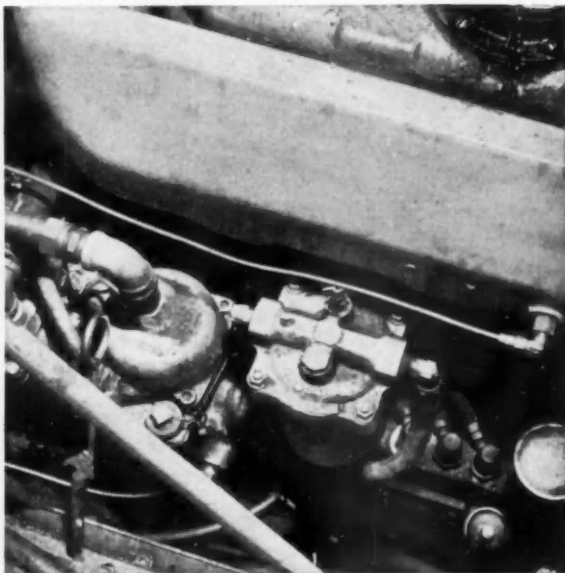
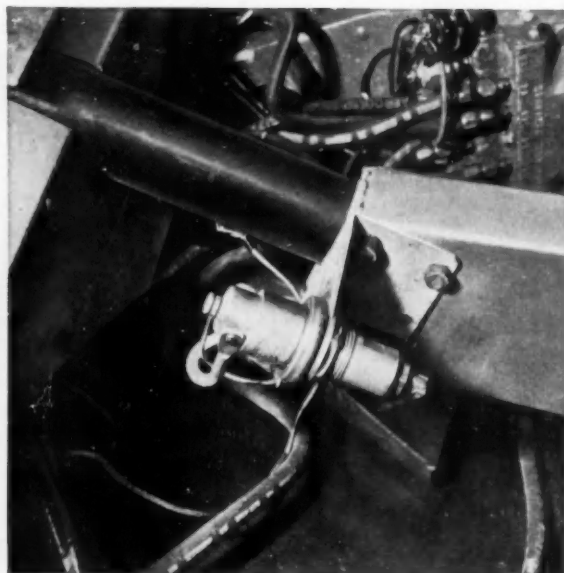


Your B. F. Goodrich retailer is listed under Tires in the Yellow Pages of your phone book

# The Engineer's Field Report

CASE HISTORY  
*Chevron Pressure  
Primer System*  
PRODUCT  
*Consolidated Freightways Inc.,  
FIRM Portland, Oregon*

## Pressure Primer System starts diesels on 1st or 2nd turn with regular batteries—at minus 40°



BELOW ZERO starting temperatures are common 5 months a year for Consolidated Freightways equipment operating in Mountain and Plain States. Two hundred and forty-four of the company's tractors are equipped with the Chevron Pressure Primer System. Since this installation, rigs start on first or second turn at 40° below zero—using regular equipment batteries! Normally in these sub-zero temperatures, regular batteries give out after about 4 turns. Sure starts plus the fact engines are primed with Chevron Pressure Primer bulbs, controlled from

within the cab, saves Consolidated Freightways important man-hours and speeds operating schedules. Picture above (left) shows a Chevron Pressure Primer Discharger mounted on steering column. Highly volatile priming fuel is atomized through tubing into manifold (right) under 250 lbs. pressure.

**FREE FOLDER** tells you more about Chevron Pressure Primer System and how to install it on different engines. Write or ask for it today.

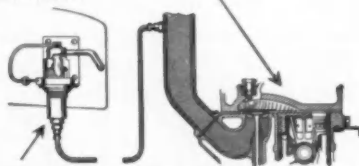


TRADEMARK "CHEVRON" REG. U. S. PAT. OFF.

**FOR MORE INFORMATION** about this or other petroleum products of any kind, or the name of your nearest distributor, write or call any of the companies listed below.

### Why Chevron Pressure Primer System helps starting

Volatile Chevron Priming Fuel atomizes in induction system at temperatures as low as -65°F. Pressure or weakest spark from engine fires mixture.



Simple, rugged discharger prevents fuel leakage. Small, safe steel bulbs protect fuel from water and dirt.

STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20 • STANDARD OIL COMPANY OF TEXAS, El Paso  
THE CALIFORNIA OIL COMPANY, Perth Amboy, New Jersey • THE CALIFORNIA COMPANY, Denver 1, Colorado

# "You can drive 10 hours on this seat and not get tired!"

*Says* Kenneth King of Signal Trucking Co.



Signal Trucking Company of California, one of the nation's largest carriers, recently purchased 10 big Reo AC-703 tractors factory-equipped with new Bostrom Level Ride 80 torsion suspension truck seats. Kenneth King, winner of 9 safety awards as an outstanding Signal driver, said, "My cab now has a passenger car ride. With this Bostrom truck seat I always feel in complete control of the truck . . . even going around sharp curves and over washboard roads. You can drive 10 hours on this seat and never get tired."

Progressive trucking firms, like Signal, find that by providing the best in equipment for their drivers, employee morale stays high and driver turn-over low. By keeping drivers rested and alert, schedules are easier to meet and accident rates kept at a minimum.

Electronic tests prove that the new Level Ride 80 Bostrom seat gives a five times better ride than any other truck seat . . . actually transmits 80% less vibration to the driver. In addition to the floating action of the torsion suspension, the new Bostrom seat has five adjustable posture controls to fit all drivers, giving choice of over 400 different sitting positions to reduce fatigue.



UNIVERSAL APPLICATION The Bostrom Level Ride 80 is available factory installed on all major makes of trucks and as a replacement seat for every truck. See your truck dealer or truck parts distributor — TODAY!



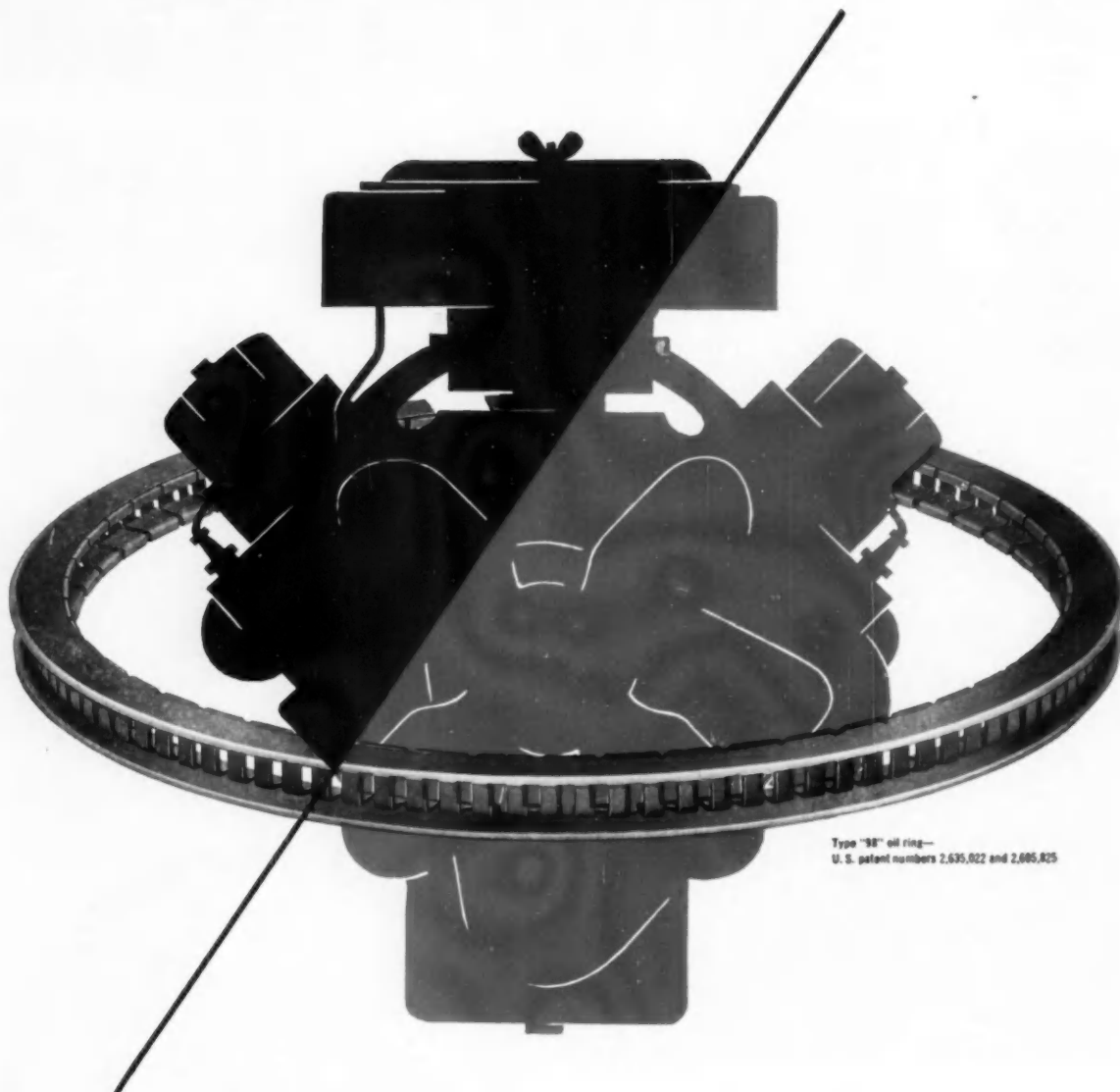
## BOSTROM

## TRUCK SEATS

® BOSTROM MANUFACTURING CO. • 100 W. OREGON ST. • MILWAUKEE 4, WIS.



# More than half\*...



of the 11,540,000 passenger car engines produced in the U.S.  
from January 1, 1955 through July 28, 1956 were equipped with

## **PERFECT CIRCLE** *type "98" chrome oil rings*

**"Best for New Engines...Essential for Worn Engines"**

\*53.4% were Perfect Circle Type "98" chrome oil rings. 46.6% were all other oil ring types combined, including other Perfect Circle oil ring types.



# UP FRONT WITH **CCJ**

DECEMBER 1956 FLEET HIGHLIGHTS AS REPORTED BY COMMERCIAL CAR JOURNAL

**MR. EXECUTIVE,** will your fleet be able to comply with the Interstate Commerce Commission's Brake Regulations by the Jan. 1, 1957, deadline? American Trucking Assns. Research Dept. (1424 Sixteenth St., N. W., Washington 6, D. C.) is doing the asking. Tell them how many tractors, how many trailers in your fleet and whether or not you can make the deadline. If you can't, give the reason—emergency valves not available, lack of time, regulations not clear, etc. ATA would like to know right away. At the end of November, the ICC denied firmly a rumor that the Brake Regs would be postponed.

**FEDERAL TAX** on trucks with over 26,000 lb "taxable gross weight" still hadn't been spelled-out in detail last month. However, the tax schedule—along with filing instructions and certain definitions—has been issued (see page 116, this issue). Form No. 2290 to cover tax return on trucks in service up to the end of November should be available from Internal Revenue Service District Directors. This return is due by Jan. 31, 1957. At press time, the word from the IRS was that the full tax rules would be out "in a few days." The delay was not unexpected. Almost every highway-user group strongly protested the proposed methods of determining the taxable gross weight at the end-of-October hearings (Nov., page 34) on the tentative tax rules.

**OUT OF SERVICE** will go any truck "found to be in such condition that it would be hazardous for it to continue operating" says ICC's Bureau of Motor Carriers. The warning was contained in the report on the ICC's third nationwide safety check made in October. Results were about the same as the earlier May and August checks (July, page 18; Nov., page 34) with 89.8 per cent of vehicles found to be "defective or deficient" according to ICC's inspectors. Biggest problem continued to be drivers' logs and doctor's certificates. But out of 8098 vehicles checked, 648 power units and 877 trailers had brake tubing and hose that failed to satisfy the ICC. Rule of reason will be used in ordering vehicles out of service, however. BMC Safety Section Chief Ernie Cox says it will only be done in case of defect likely to cause an accident.

**DAMAGE SUIT** between Pennsylvania's truck operators and the eastern railroads now enters Round 2. Truckers won Round 1 late last month when Judge Clary denied the railroads' request that the case be dismissed. In effect, the decision says that the truckmen apparently have a good case. Now it will be up to the railroads to show that they are not liable. Most of the two months since the trial opened (Oct., page 36) have been used by the truckers to pile-up evidence designed to show that the railroads illegally conspired to stymie truck competition. Railroads' answer was that what they did was legal competition. Seemingly the Judge has his doubts about that.

# DETROIT DISPATCH

**NEW TRUCKS ARE** getting a big exhibit boost along with the 1957 passenger cars. If you miss the truck display at the National Auto Show now in progress (Dec. 8-16 and previewed in this issue, page 72,) you can still catch the latest in trucks at the Chicago Auto Show, Jan. 5-13, in the International Amphitheatre.

**REO IS** in line to get an Army Ordnance Corps contract, it is reported. Involved are some \$13 million worth of 2½-ton trucks.

**SYNTHETIC RUBBER FOR** truck tires may be closer than you think. Eastman Chemical Products last month announced two new chemicals designed to cut deterioration and cracking of GR-S rubber under continuous flexing. The new compounds may permit longer tire storage also.

**GREYHOUND BUSES POWERED** by Daimler-Benz diesel engines have been seen on the test track at the Curtis-Wright plant in Utica, Mich. Curtis-Wright (who controls Studebaker-Packard) gives no details on the experimental work. Unconfirmed speculation continues that Studebaker-Packard may market the Daimler-Benz line—diesel engines, fuel injection, cars and trucks.

**ICC'S LATEST REPORT ON** mechanical defects involved in accidents covers the year 1953. In that year, 5.89 per cent of accidents reported to the Commission involved mechanically defective trucks—a record low. Biggest single offender is the service brake, blamed for 36 per cent of truck mechanical defect accidents. Wheels and tires share the limelight as next highest offenders—about 9 per cent each.

**ON THE BUS SIDE,** the Commission reports mechanically defective buses involved in 2.11 per cent of reported accidents in 1953. Here again, service brakes are by far the largest category, with some 41 per cent of mechanical defect bus accidents involved. Next highest defect—tires—accounts for 12 per cent.

**PRICES ON** two makes of trucks were increased about 6 per cent last month. Higher material and labor costs were cited by both Dodge and White as reasons for the boost.

**METALLIC BRAKE LININGS FOR** trucks may be ready within a year or two. Recent advancements have brightened prospects for the new type. It consists of metallic "biscuits" attached to the brake shoes instead of

## WASHINGTON WATCH

**TON-MILE TAX IN** Nebraska was defeated by the people in a public referendum (Nov., page 5). It was turned down by a decisive vote of about 298,687 to 235,294. The action was a blow to the anti-truck boys, who expected to use the public referendum technique to saddle trucks with a ton-mile levy in this state as well as others.

**FROZEN FRUITS AND** vegetables are exempt agricultural commodities. As such, they can be hauled without an ICC permit, says the U. S. Supreme Court ruling in the case of Home Transfer & Storage Co.

**LIMITED ACCESS DESIGN IS** necessary to keep major highways adequate for the next 20 years, Maj. Gen. Louis

W. Prentiss, American Road Builders' Assn. executive vice president, told members of the American Assn. of State Highway Officials at its annual meeting late last month in Atlantic City, N. J.

**EARLIER LAST MONTH,** the state highway officials and the American Municipal Assn. set-up a joint AASHO-AMA committee to help in solving city, state and business problems that might snarl-up the overall highway program. The trouble-shooting venture has no official standing, but does have the approval of the Bureau of Public Roads.

**RECIPROCITY AND** interstate taxation of commercial vehicles will be argued at the January meeting of the ATA Ex-

conventional linings. Advantages are elimination of fade and increased efficiency in face of heat build-up. Still to be solved, however, are problems of cost and brake drum wear.

**TRAILERS MAY** be the exception so far as price increases are concerned. Most trailer builders upped prices earlier this year. Enough, they believe, to offset recent higher costs.

**GOODYEAR TIRE & Rubber Co.** says there will be a "downward readjustment" of consumer prices on its premium nylon truck and passenger tires. Without stating any amount, the company said the reductions would be in effect by the end of this month and will vary as to type and size of tire.

**AUTOMATIC TRANSMISSION FOR** trucks as made by GM's Allison Division will be offered by one or two more large truck builders after the first of the year. Presently Chevrolet is the only one using the automatic drive which it calls "Powermatic."

**GM HAS ALSO** offered its air suspension system in "package" form to the country's trailer makers. GM's heavy-duty 1957 trucks, soon to be announced, are expected to have air springing.

ecutive Committee. Last week of November, state truck association and ATA conference representatives debated the twin subjects, prepared a policy recommendation for the Executive Committee.

**INTERNATIONAL Harvester Co.** has for the fourth consecutive year, renewed its annual \$50,000 grant to support the work of the ATA Foundation.

**MOBILE RADIO CAN** be used for trucks within urban areas as well as between cities, according to a rule change proposed by the Federal Communications Commission. The proposal is backed by an ATA petition. Interested parties have until Dec. 19 to comment to the FCC.

## TRUCK TONNAGE

**SEPTEMBER 1956** intercity freight transported by truck was down 6.6 per cent from the volume hauled in Sept. 1955 and 6.5 per cent less than that hauled in Aug. 1956, reports the ATA Research Dept. Tonnage for the first three-quarters of 1956, however, was 4.3 per cent ahead of the first nine months in 1955. For an interesting comparison on a ton-mile and passenger-mile basis of how 1954 and 1955 volume was split between types of carriers, see page 110 this issue.

Month	% Change from Previous Month	% Change from a Year Ago
September, 1956	-6.6	-6.6
August, 1956	+12.7	+1.3
July, 1956	.....	+11.2
2nd Quarter, '56	.....	+5.6
June, 1956	-0.9	+6.8
May, 1956	+5.5	+6.4
April, 1956	-5.2	+0.9
1st Quarter, '56	.....	+7.9
March, 1956	+6.8	+1.4
February, 1956	-1.0	+12.7
January, 1956	+3.4	+12.9
4th Quarter, '55	.....	+16.1
December, 1955	-6.3	+11.9
November, 1955	-0.9	+17.0
October, 1955	+1.5	+19.2
3rd Quarter, '55	.....	+15.4

## TRUCK AND BUS PRODUCTION

Make	For Weeks Ending				Total Jan. 1 to Nov. 17, 1956
	Nov. 17	Nov. 10	Nov. 3	Oct. 27	
Available	4	3	6	5	329
Chevrolet	6,973	7,194	7,054	6,957	311,857
G. M. C.	1,862	1,893	1,920	1,886	81,840
Diamond T	84	104	108	101	4,637
Dodge	60	8	6	56	3,161
Dodge and Fargo	1,500	1,731	2,061	2,173	79,412
Ford	5,806	5,348	5,439	5,194	268,872
F. W. D.	68	32	25	24	1,515
International	2,455	2,909	208	2,807	119,624
Mack	386	287	80	412	16,056
Reo	55	89	89	79	3,485
Studebaker	335	382	248	349	13,141
White	304	294	291	333	15,683
Willys	1,564	1,436	1,260	1,340	55,455
Other Trucks	83	89	96	86	5,576
Total—Trucks	21,339	21,689	18,881	21,802	900,654
Total—Buses	39	69	65	42	3,783
Total—Trucks and Buses	21,378	21,758	18,946	21,844	904,437

Source: Automobile Manufacturers Assn.

## IN THIS ISSUE

St. Louis Public Service tells how to convert an old **BUS** to a modern **SALT SPREADER** (page 70).

Ted McGill explains why he ranks the **FLEET BOSS** as part of **MANAGEMENT** (page 74).

Emery Transportation reports the three-point result of two years of **REEFER RESEARCH** (page 78).

The 1956 **EDITORIAL INDEX** gives you a handy guide for locating the year's important articles (page 85).

# The Road Ahead



**PRIMARY BUSINESS TEST FOR** private carriage should be included in the Interstate Commerce Act says ATA's Private Carrier Conference. It has drafted a legislative proposal for consideration by its members and possible introduction into Congress next month designed to (1) add the primary business test to Section 203 of the IC Act, and (2) shift "buy and sell" truck operators into the for-hire group. Other legislation headed for action in January is briefed below.

**RAILROADS WANT** to take-over the trucking industry charges Neil J. Curry, ATA Executive Committee chairman. First step would be to ram through Congress the "Three Shall Nots" which will ruin ICC's regulatory power (Sept., page 76). Next step would be a rate war followed by "substitution of rail-owned truck lines once the independent ownership has been eliminated from the picture." Curry's warning was made at last month's annual meeting of the Associated Motor Carriers of Oklahoma.

**HIGHWAY CONSTRUCTION COSTS WERE** up 3.8 per cent in the third quarter of this year as compared to the second quarter. In fact, says the Bureau of Public Roads, this is the fifth consecutive three-month period that highway prices have gone up. BPR's federal-aid highway cost index stands at 140.5 for the third quarter, a record high. For fleet operators, increased highway costs plus increased highway building can only mean increased highway use taxes as most of the 48 state legislatures meet next month (Aug., page 70; Sept., page 73).

**COMPULSORY INSURANCE IS** also a sure thing in quite a few of the state legislatures. Most insurance companies warn that if it passes, higher insurance rates will follow. Incidentally, higher insurance rates seem to be in the cards anyway. Higher liability claims (Sept. page 33) are pushing rates upward and most insurance companies are reported seeking rate increases for 1957. Even with fewer accidents, fleets can find accident costs just as high or higher. Reason being that fancy new model cars cost more to repair—especially with new rear-end styling.

**TRANSPORTATION TAX WILL** come in for strong attack when Congress begins to consider excise tax revision. Both carrier and shipper groups were scheduled to urge its repeal at committee hearings early this month. However, most excise tax revision will be administrative and technical rather than a decrease in rates. There'll be no change in federal highway excises (vehicle, fuel, parts, tires, etc.) unless rates go up to cover increased highway costs.

**PRODUCTION FOR** the first three-quarters of 1956 of major commercial vehicles is somewhat behind 1955's nine-month total, but not too far as shown below:

In thousands of units, except bus sales are in actual numbers	New Truck Registrations		Truck Factory Sales—Domestic		Truck Trailer Shipments		Bus Factory Sales—Domestic		Truck and Bus Tires					
									Replacement Shipments		Original Equip. Shipments		Inventory End of Sept.	
	Sept.	9 Months	Sept.	9 Months	Sept.	9 Months	Sept.	9 Months	Sept.	9 Months				
1956	72.4	685.7	56.9	676.7	4.8	52.5	364	3037	811.0	6635.7	291.1	3531.7	3179.9	
1955	89.9	700.5	76.9	786.1	7.1	55.3	198	2468	604.4	6911.0	393.4	3670.1	2267.5	





Trying out the new automatic dispatching system. Standing (left to right): Mr. Howard Brown, Mr. Eldon Miller, Mr. L. C. Davidson. Seated at the teletypewriter is Mr. Earl Schneckenberger, Branch Manager at McFarland, Wisconsin.

## New communications system cuts morning line-up by 30 minutes

"Our daily morning line-up, which used to take 45 minutes, is now completed in 15," says Mr. Eldon Miller, President of Eldon Miller, Inc., of Iowa City, Iowa.

"Our new Bell System automatic teletypewriter dispatching also enables us to handle three times the message traffic that we could handle before. We save an hour and a half a day at each branch office.

"In addition, we can now cross haul or back haul more efficiently. For example, a unit loaded out of Iowa City for Davenport, Iowa, can be

notified on arrival to pick up another load in nearby Bettendorf and return to Iowa City. This in effect keeps 'no load' miles to an absolute minimum. And we can shift units rapidly, adding at one branch to handle an overload, or dispatching a unit from any point to pick up an emergency shipment."

. . .

*A wide variety of teletypewriter arrangements is available to meet any specific needs. A Bell System communications engineer will be glad to show you how Bell System services can be tailored to serve your business most efficiently and profitably.*



BELL TELEPHONE SYSTEM

PRIVATE LINE TELEPHONE

PRIVATE LINE TELETYPEWRITER

CHANNELS FOR: DATA TRANSMISSION

TELEMETERING

REMOTE CONTROL

TELEPHOTOGRAPH

CLOSED CIRCUIT TV

# Pure Oil's fleet has used AC



*Today, Pure Oil trucks travel  
20,000,000 miles a year — proof  
AC delivers the goods!*

**COMMERCIAL SPARK PLUGS**



# Spark Plugs for over 20 years!

Oil company trucks in a fleet such as Pure's meet virtually every type of road and load condition the United States has to offer—from oil field . . . to refinery . . . to retail sales. Pure Oil's fleet of 1400 trucks has to handle all these operations and operate in more than 30 states as well.

When a company like Pure Oil chooses a spark plug,

that choice must be right. Original cost, operating costs, performance, total life—all these factors are carefully weighed. Then, they are checked and re-checked on the basis of actual experience.

Pure Oil has used AC for over 20 years. Why not take a tip from Pure's experience? Put AC Hot Tip Spark Plugs to work in your fleet, too.

AC SPARK PLUG  THE ELECTRONICS DIVISION OF GENERAL MOTORS

Watch WIDE WIDE WORLD—NBC-TV





## Fm sintered copper-lead bearings . . . for heavy-duty performance they have no equal!

From that pile of powder comes the copper-lead lining that means maximum mileage in heavy-duty bearings. Each tiny powder particle is a grain of alloy of controlled copper-to-lead proportion. When the powder is sintered on steel strip it makes a tough, durable bearing lining of unmatched mileage-producing performance!

With the same care we apply the brass barrier plate which assures lining stability, the lead-tin overplate which eases break-in, and the flash plate of pure tin which adds corrosion resistance. It is the know-how in bearing manufacture for heavy-duty use that has made Federal-Mogul first choice for replacement . . . preferred by fleets 2 to 1. Call your jobber!

### FEDERAL-MOGUL SERVICE

Division of Federal-Mogul-Bower Bearings, Inc.



# "Tachographs

help us recognize our good drivers  
for their performance, efficiency  
and safety habits"\*



PHILADELPHIA TRENTON JERSEY CITY NEW YORK

**W.T. COWAN, INC.**  
*Fast Motor Freight*

EXECUTIVE OFFICES  
BAYARD AND CLEVELAND STREETS  
BALTIMORE 30, Md.

Wagner Electric Corporation  
6400 Plymouth Avenue  
St. Louis 14, Missouri

Gentlemen:

Operating a large fleet hauling from New York south to Washington, D. C., requires careful operating planning on our part. In fact we, who are connected with W. T. Cowan, Inc., take pride in the fine reputation we have gained by providing fast, safe, on-schedule delivery of customers' cargo and equipment.

Tachographs have played an important role in our fleet operation. They are installed as standard equipment on 115 of our highway tractors and have been very dependable while in service. They have aided us in establishing average running time used in setting schedules and also determining accurate mileage. And because speed is controlled and carefully checked, over-all maintenance has been reduced and safety greatly increased.

We like Tachographs because they help us recognize our good drivers for their performance, efficiency and safety habits. We definitely plan on continuing to rely on Tachographs by installing them in every new over-the-road vehicle we operate.

Sincerely yours,  
*R. W. Furtick*  
R. W. Furtick  
Vice President & General Manager

\* R. W. FURTICK, Vice-President and General Manager  
W. T. Cowan, Inc., Baltimore, Maryland

In addition to encouraging good driving habits, you can establish more profitable schedules and gain other advantages by relying on Tachographs and their accurate analysis of complete trip information. You will soon find that Tachographs are essential to safe, economical over-the-road operation. They help you maintain on-time schedules and, because they improve driving habits, you gain extra maintenance savings as reflected in tires, fuel and mileage.

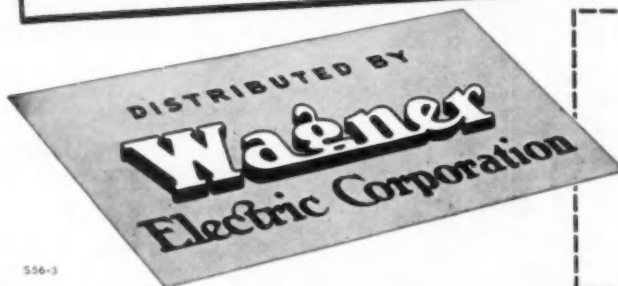
Tachographs are easily mounted on the dash. They connect directly to the speedometer cable. The wax-coated chart, inserted inside the durable aluminum Tachograph case, provides complete information—accurately and permanently recorded.

It tells all:

- When engine started
- How long it idled
- When vehicle was in motion
- How fast it traveled
- When it stopped—and for how long

Illuminated dials on the Tachograph show time of day, m.p.h. and total mileage. Tachograph models which indicate and record r.p.m. are also available. A red light warns the driver when a pre-determined speed is exceeded.

Mail the coupon below for your free copy of Bulletin SU-3—it gives a complete "inside story" on Tachographs. No obligation, of course.



## Wagner Electric Corporation

6476 PLYMOUTH AVE., ST. LOUIS 14, MO.

Please send a copy of Bulletin SU-3.

Name and Position \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

We operate \_\_\_\_\_ Vehicles  
(NUMBER)

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID • CoMoX BRAKE LINING • HoRoL • AIR HORNS • AIR BRAKES • TACHOGRAPHS • ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL CRANE BRIDGE BRAKES





# Laugh it off!

FATTY FLOORBOARDER SAYS: "NOW-ADAYS AN OLD-FASHIONED GIRL IS ONE WHO PREFERS THEM TO MARTINIS."

CCJ

Shop Foreman: "We've got a parakeet at our house that won't eat anything but navy beans."

Air Brake Specialist: "Most unusual. How do you account for his exclusive addiction to lentils?"

Shop Foreman: It's because he wants to be a Thunderbird."

CCJ

The automotive parts clerk and his sweet patootie were parked on a dark stretch of side road in the wee hours of the morning.

A motorcycle cop pulled alongside the car.

"Hey," yelled the cop. "What business have you got to be out here on this lonely road at this hour?"

"This isn't business," replied the Parts Clerk. "It's a pleasure!"

CCJ

The OS&D Clerk had been to a traffic club meeting and had "just two" drinks with the boys. He was driving the wrong way, against traffic, on a one-way street. Of course a cop stopped him.

Cop: "And just where do you think ye be goin', me lad?"

OS&D Clerk: "I dunno, but I mush be late. Everybody's comin' back!"

CCJ

Steno May: "Say, Faysie, that guy I saw you with last night is a real livin' doll. What's his pedigree?"

Steno Fay: "Oh, he's a big wheel with Coca Cola. He has the paws that get fresh."

Dynamometer Mechanic: "Last night I mistakenly poured some of my highball in the canary's water dish.

Maintenance Supervisor: "What happened?"

Dynamometer Mechanic: "The canary bent back the bars of his cage and chased the cat out of the house."

CCJ

Cute Girl's Father: "Young man, we turn the lights off around here at 10:30."

Automotive Parts Clerk: "That's okay, sir. We won't be reading."

CCJ

Maintenance Superintendent: "Why are you late this morning?"

Maintenance Secretary: "On my way to work a man followed me all the way."

Maint. Supt.: "And you think that's sufficient excuse for being late?"

Maint. Secy.: "Well you see, the man walked so slowly!"

## Merry Christmas



HOBOKEN HERB SAYS: "WOMEN LIKE BIG MEN. IT SEEMS THAT THE GALS ARE OF THE OPINION THAT THE BIGGER THEY ARE, THE HARDER THEY MAUL."

CCJ

Fleet Operator: "There, on our right, is Niagara Falls. Didn't I tell you that if you'd be my wife you could look forward to the biggest cataract you'd ever seen."

Blonde Bride: "Oh, you big four-flusher. I thought you said "Cadillac."

CCJ

Slim 'n' Greasy: "How about a big, juicy kiss, baby? It'll be a feather in my cap."

Bar Maid: "Come around and pick me up when I get off at eleven, big boy, and I'll make you an Indian Chief."

CCJ

Two diner waitresses were standing at a table at which a tired truck driver had fallen asleep.

1st Waitress: I've already awakened him twice, now I'm going to wake him for a third time."

2nd Waitress: "Why worry with him. Just call the manager and have him put out."

1st Waitress: "Are you kiddin'? Every time I wake him up he pays his bill over again and gives me another tip."

CCJ

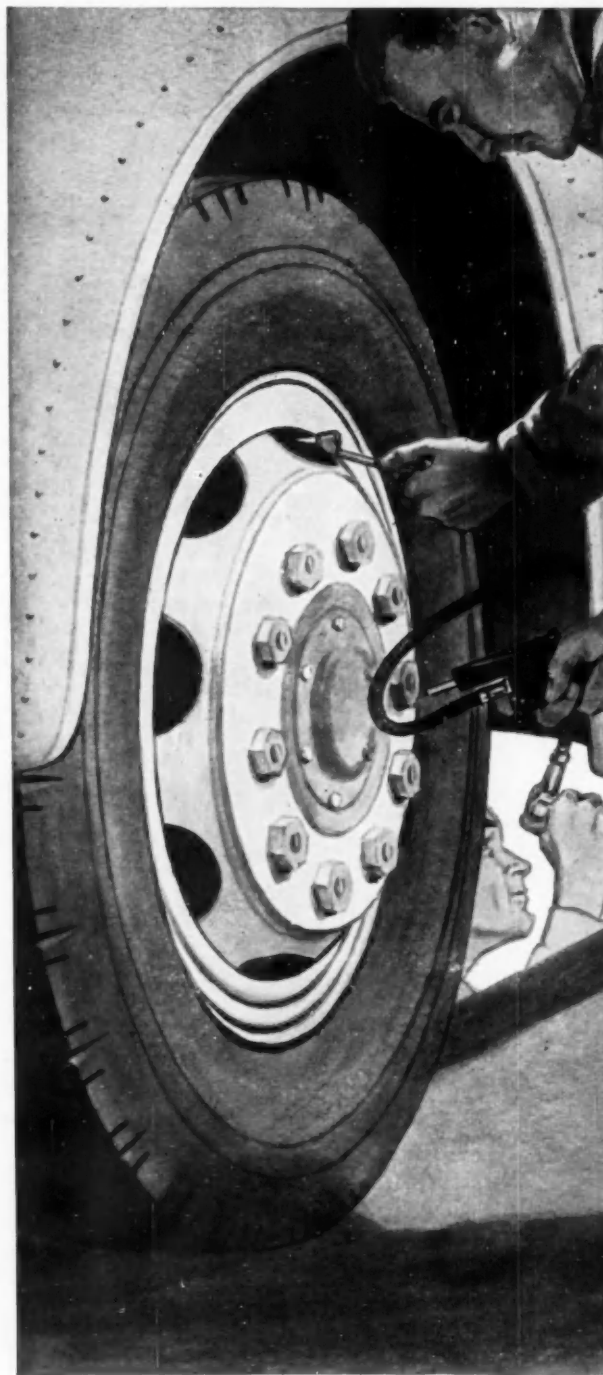
Cop: "Where do you think you're going?"

Diesel Mechanic: "Hic, I'm comin' home from a Halloween Party."

Cop: "Are you kidding? Halloween was two months ago."

Diesel Mechanic: "I know. That's why I figured I better be gettin' home."

## Resume Work



**TUBE or TUBELESS . . .**

## Add "flat catching" to your routine pit procedures

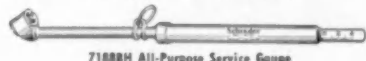
Flats on the highway make overhead soar. Many fleet owners are saving money by catching flats before they happen by using accurate Schrader gauges. Regular daily gauging shows up slow leaks . . . the signal of a future flat. This lets them fix tubes and tires in the shop during regular maintenance hours, when it's cheap. Flats during runs are minimized.

This plan is even more effective when you use Schrader Air Chucks, Couplers, Chuck Gauges and Accessories for faster, better operating air lines. The Schrader 7188BH All-Purpose Service Gauge is best for all tire inspection work, and the accuracy of your gauging-inflating equipment can be certified with a Schrader 8106B Trutest Special Gauge. It pays to specify Schrader products from your supplier, whether it's caps, cores, tube or tubeless valves or anything needed for fast, accurate air service.

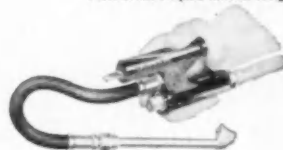
**Schrader Products**  
important to best tire maintenance



8106B for checking all other gauges



7188BH All-Purpose Service Gauge



New 3650 Type Chuck Gauge



7611  
Heat-Resisting  
Core

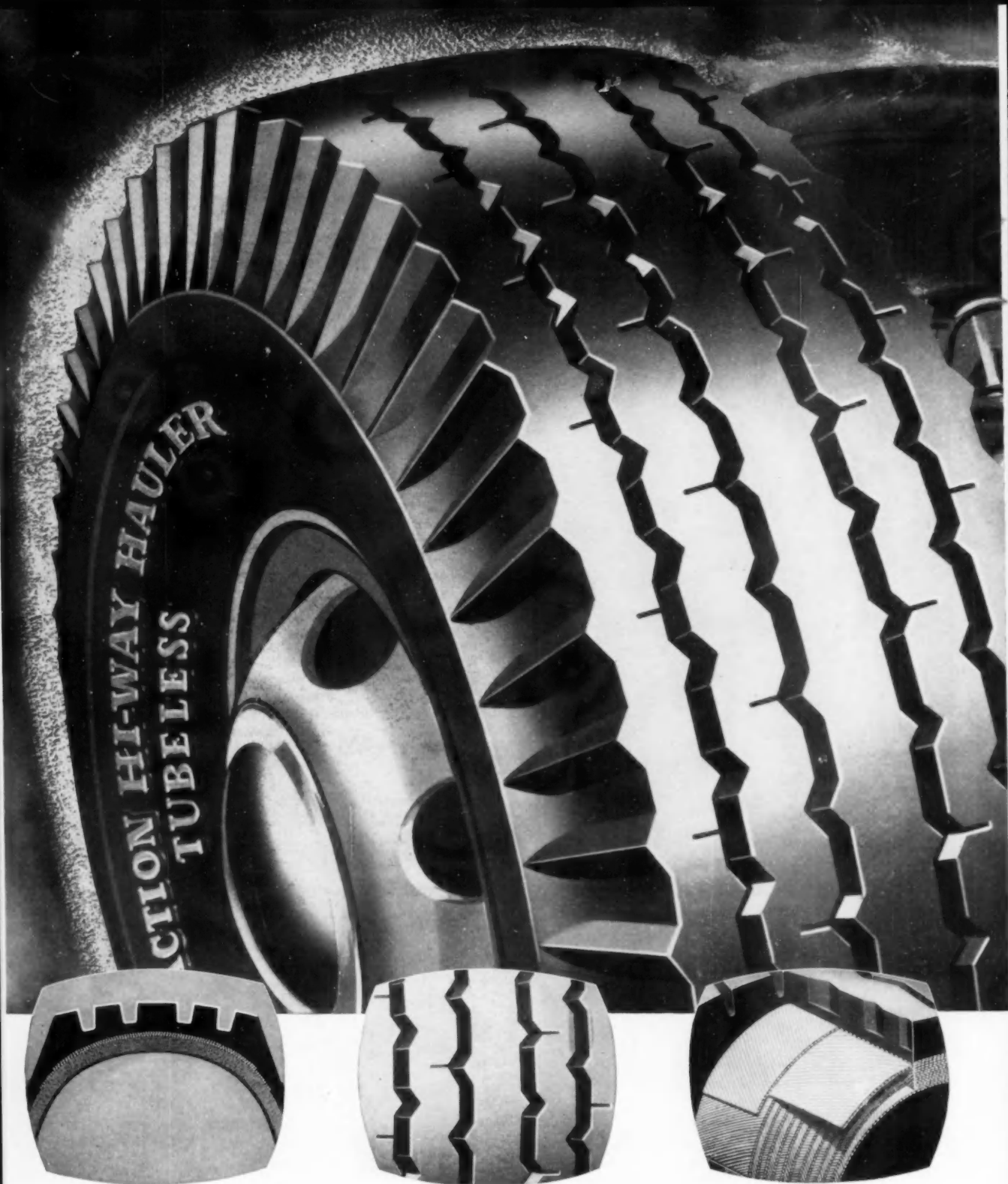


7612 Heat-Resisting Cap

**A. SCHRADER'S SON**  
Division of Scovill Manufacturing Company, Incorporated  
470 Vanderbilt Avenue, Brooklyn 38, N. Y.

**Schrader®**  
ESTABLISHED IN 1844

FIRST NAME IN THE SAFEST TIRE VALVES  
FOR ORIGINAL EQUIPMENT AND REPLACEMENT



#### **New Armor-Coated Tread**

A special layer of super-tough rubber covers the tread. Although this protective layer wears off the tread surface, it continues to "armor-coat" the sides and bottom of tread grooves for the life of the tread, helping to prevent tread cracking and cut growth. Result . . . longer tire life.

#### **Traction-Grip Tread Design**

Hundreds of Traction-Grippers are molded into the four outside ribs of the tread. They permit greater skid resistance, more traction and improved braking power. The center rib is wider than the other four, putting more rubber where the greatest wear occurs for increased mileage.

#### **Nylon Shock Protectors**

Between the tread and the cord body of all tires, 8-ply rating and up, are two layers of tough rubber-coated nylon. They absorb and distribute sharp road impacts and prevent damaging impact from shortening tire life. As a result, a greater number of retreads are possible.



# NEW

## Hood Traction Hi-Way Hauler Tire

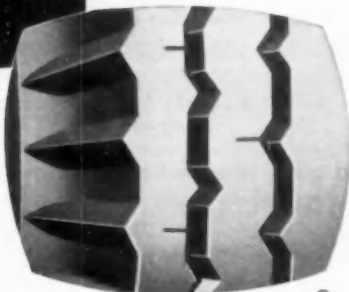
*... available in tubeless or  
tube-type construction*

Here's a new all-wheel highway truck tire designed and constructed to deliver maximum traction, maximum safety and maximum mileage. The Hood Traction Hi-Way Hauler is available in tubeless or tube-type construction in a full range of sizes. Shown here are only a few of the revolutionary new construction and design features. See your Hood Tire Distributor for complete details on how this new tire can help you cut hauling costs. Or write Dept. CH-12, Hood Rubber Co., Akron, Ohio.



### Free-Flex Cord Construction

There are no bulky cross threads in Free-Flex construction. The parallel cords work together with no "slackers". Tension is accurately controlled so that each cord in every ply carries its fair share of the load. The result is a stronger, cooler-running, longer-mileage truck tire.



### Heat-Expelling Shoulder Design

Special fluted shoulder design helps dissipate excessive heat when the tire is traveling at high speeds under heavy loads. One of the chief causes of premature failure—ply separation—is greatly reduced because the tire runs cooler.





## Congratulations! You Made It!

Here it is almost the end of another year and you're still alive and more or less in one piece. Well, congratulations!!! We're glad you made it.

Sure, there were times when you came close to shaking hands with St. Peter. (Maybe more times than you like to remember.) But—lucky you—he's still up there waiting, and you're still down here. Slightly battered, maybe, but still in there pitching.

If you managed to get through the whole year without even a close shave, you can take a deep bow. But don't let success go to your head, 'cause a swollen noggin can bruise easily the next time you're in a tight spot. Sure, you can be proud of your safety record. But it's past history now, and you'll need skill and safety consciousness to stay out of future trouble.

If you've picked up a few scars, let them be gentle reminders. Looking back, you can see now how they could have been avoided, and this year's experience makes you that much better qualified to stay out of future trouble. Maybe you'll make mistakes, but don't let them be the same ones you made this year.

Between now and the end of the year, you're sure to receive many Season's Greetings. But none of them will be more sincere than this wish for you in 1957: "Stay alive and don't get hurt. We want you with us for a long time to come."



# Can you save \$2000 per year – per truck on refrigeration costs?



Mr. Cecil Clupper

All-electric truck refrigeration powered by General Electric is saving the Clupper Dairy, Wabash, Indiana, about \$2000 a year—on one wholesale delivery truck.

Here's a breakdown of the dairy's 1955 savings on the

truck reported by Mr. Cecil Clupper, owner:

**Saves \$1.50 each day on ice costs**—"No more ice costs with the all-electric system—saves us at least a dollar and a half a day."

**Saves \$2.00 to \$4.00 on labor costs each day**—"Melting ice used to force us to come back and re-load with fresh ice after covering about half the route. This used to cost us two to four dollars a day for labor, and two to three hours in time."

**Saves up to \$5.00 each week on truck maintenance**—

"My all-electric system is light—about seven hundred pounds lighter than a cold-plate system, for example. Less weight means less wear and tear on the truck. Consequently, my garage bill goes down about four to five dollars a week."

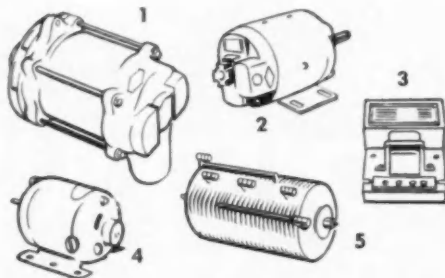
**Benefits other ways**—Other benefits Mr. Clupper reports include: easy plug-in to 115-volt a-c outlet makes the truck a warehouse on wheels, dry cold eliminates sloppiness of ice. More room for payload results because all-electric system is more compact. Spoilage costs are reduced because system provides uniform cold.

## CLUPPER DAIRY SAVINGS POSE A QUESTION:

Can you afford *not* to invest in all-electric truck refrigeration? Three-quarter to three-ton systems are available. For list of system manufacturers and free bulletin, send in coupon below today. General Electric Company, Schenectady, N. Y.

*Progress Is Our Most Important Product*

**GENERAL  ELECTRIC**



Electrical components for all-electric truck refrigeration: (1) alternator (2) compressor drive motor (3) voltage regulator (4) evaporator-fan motor (5) selenium rectifier.

## ACT NOW! Send for FREE bulletin

Section E 634-B  
General Electric Company  
Schenectady 5, New York

Please send me your new bulletin GEA-6084-B describing the benefits of all-electric truck refrigeration powered by General Electric.

NAME .....

COMPANY .....

STREET .....

CITY ..... ZONE ..... STATE .....

# RELIABLE

**CATERPILLAR®**

99% OF ALL CAT MOTOR  
GRADERS EVER BUILT  
ARE STILL ON THE JOB



AUSTIN-WESTERN WORKS  
BALDWIN-LIMA-HAMILTON  
Corporate Equipment Division



TRADE **CHAMPION** MARK

**ADAMS DIVISION**

LeTourneau-Westinghouse Company

Whether for close-coupled main drive lines or for exposed steering and adjustment drives, designers with **JOINT** problems have learned to rely on **MECHANICS**. Where joints must run all day at high angles — where there are severe shock loads — where wide angles and long slip are common — and where dirt and/or moisture constantly are present — **MECHANICS** Roller Bearing **UNIVERSAL JOINTS**

are the accepted solution. *Lubrication is so tightly sealed in that dirt and moisture cannot enter.* If you have a "tough" joint problem, make use of **MECHANICS** field engineers' wide experience.

**MECHANICS UNIVERSAL JOINT DIVISION**

**Borg-Warner • 2034 Harrison Ave., Rockford, Ill.**

Export Sales: Borg-Warner International  
36 So. Wabash, Chicago 3, Illinois

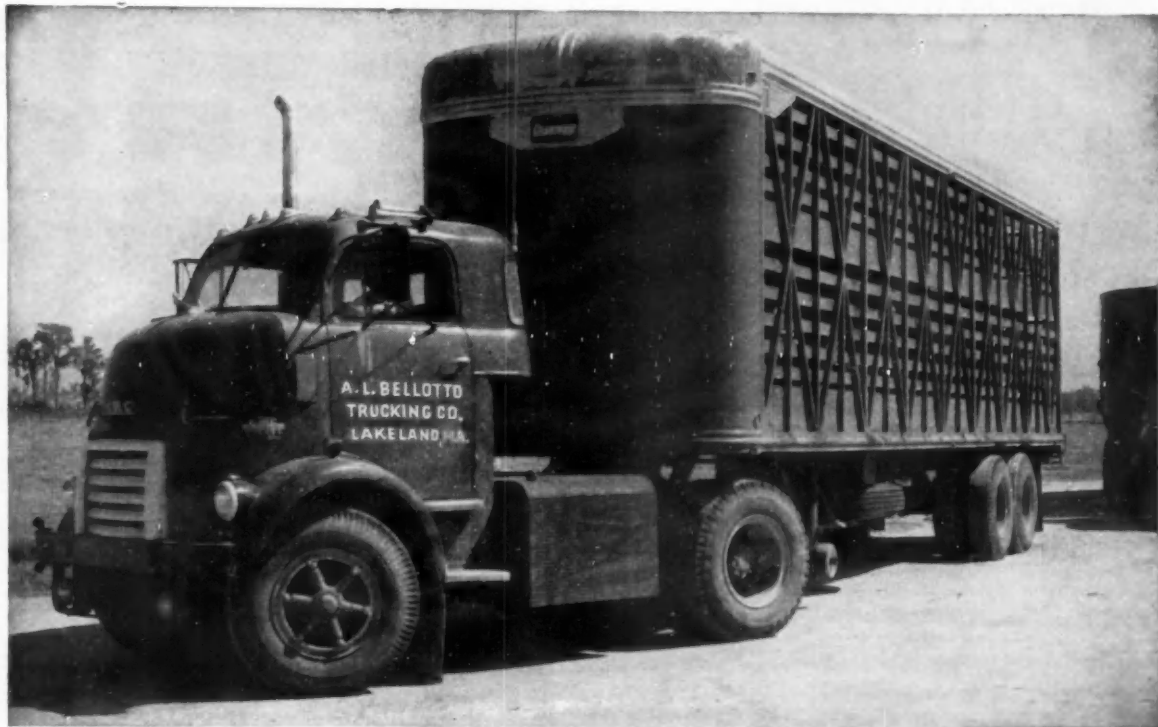
# MECHANICS

*Roller Bearing*



# UNIVERSAL JOINTS

For Cars • Trucks • Tractors • Farm Implements • Road Machinery •  
Aircraft • Tanks • Busses and Industrial Equipment



**G-E RADIO-EQUIPPED DIESEL RIG** leaves Lakeland, Florida head office to pick up livestock at auction. General Electric two-way radio keeps all rolling stock in contact with headquarters.

## G-E RADIO EQUAL TO 2 EXTRA RIGS

### —for a Leading Trucker in Florida's Cattle Country

THE A. L. Bellotto Trucking Company of Lakeland, Fla. hauls up to 4000 head of livestock each week from Florida auctions to processing plants in Georgia. A new G-E Progress Line two-way radio system ties together all Bellotto trucks and Lakeland headquarters so effectively that owner A. L. Bellotto says, "Our General Electric radio system is equal to two extra rigs."

Radio contact with trucks on the road permits closer pickup scheduling, prevents long backtracking, and reduces idle time to the extent that

without the radio system, two additional trucks would be required to duplicate present activities.

#### Exceptional Radio Range Reported

Routine operating range for the G-E radio system extends more than 100 miles from Lakeland. Reliable contact with trucks at certain points up to 175 miles from headquarters is not uncommon. Bellotto credits both superior G-E equipment, and a thoroughly-engineered installation for these exceptional radio ranges.



A roving service truck, equipped with a Progress Line super-power (90-watts) mobile radio, often communicates with trucks over a 100-mile radius. Only General Electric offers a super-power mobile unit for extensive truck-to-truck coverage.

#### G-E Selected Over Other Makes

Owner A. L. Bellotto checked competitive radios before selecting G-E units. Talks with radio users in municipalities, taxi fleets, and other truckers helped him decide on G-E. Reports from General Electric owners everywhere confirm the outstanding clarity, dependability, and low maintenance of G-E 2-way radio.

New General Electric Progress Line radios offer versatile 6 and 12 volt operation, complete chassis interchangeability for easy servicing. What's more, only G-E radios come equipped with 6600 series communications-type tubes pre-tested for rugged duty and long life. Your G-E Communications Counselor has the full information. Call him in, or write today to: *General Electric Company, Communication Equipment, Section X70126, Electronics Park, Syracuse, New York.*



**OWNER A. L. BELLOTTO** with General Electric radio-equipped utility vehicles. Fleet of nine over-the-road trucks are also G-E equipped. "Our G-E radio takes the place of two extra trucks," says A. L. Bellotto, "and turns in impressive coverage for us."

*Progress Is Our Most Important Product*

**GENERAL  ELECTRIC**

# Fleetman's

# LIBRARY

FOR FREE ITEMS INCLUDED IN THIS REVIEW OF CURRENT MAINTENANCE AND SAFETY PUBLICATIONS, USE READER SERVICE POSTCARD ON PAGE 52

## Alternator Service Wall Chart

Available from Leece-Neville Co. is this brand new trouble shooting wall chart for standard and heavy-duty alternators. Included are 15 large illustrations.

Information presented here represents several years of experience in alternator trouble shooting. It's a complete step-by-step guide, easy to understand and to read. Three major areas covered are (1) regulator check-out, (2) alternator check-out, (3) regulator settings.

To get a copy of this wall chart for your shop, send \$1.00 to Technical Service Dept., The Leece-Neville Co., 1374 East 51st St., Cleveland 3, Ohio.

## ATA 1957 Service Catalog

Ever wonder just what services American Trucking Assns. has available for fleet operators? Here's a 26-page answer to that question from ATA General Manager Ray Atherton. It starts with a description of ATA's federal and state motor carrier regulation advisory service, concludes with ATA's Motor Carrier Directory.

In between it covers ATA's basic service, labor relations, accounting, traffic services, safety, carrier forms, ATA's special councils and public relations activities.

For your free copy, circle L2 on the postcard on page 52.

## Freight Traffic Textbook

"Elements of Freight Traffic" is by William Way, Jr., formerly Professor of Transportation at University of Tennessee. (He just finished the book before his untimely death early this year.) It is Part No. 4 of the Motor Transportation In-Service Training Program sponsored by ATA's Regular Common Carrier Conference.

As such it is a 337-page textbook on traffic written especially with the motor carrier in mind. It's more than just a revision of a railroad traffic text. In 15 chapters it covers shipping documents, classification, rules, rates and tariffs.

Copies are \$6.00 each (less in quantity), can be ordered from Regular Common Carrier Conference, American Trucking Assns., 1424 Sixteenth St., N.W., Washington 6, D. C.

## Petroleum Industry Description

Interested in the business of getting petroleum out of the ground and into your automobile or trucks in the form of fuel? Gulf Oil has just published an interesting account of how it happens in terms of people rather than technology. We think you'll find it interesting. Circle L3 on the postcard, get a free copy.

## Lubricating Grease Report

For your fleet's technical file, here is an interesting discussion of basic petroleum greases. It is concerned more with the characteristics of the grease and the methods used to test for those characteristics than with application or use.

Published by the Texas Co., it concerns itself with calcium, sodium, sodium-calcium and lithium-base greases. It opens by considering the terms "all-purpose," "multi-purpose" and "general purpose" as applied to grease. Included are a handy outline of things to consider when selecting a grease and numerous color photographs illustrating various types of grease.

Circle L1 on the postcard on page 52 for your free copy of this timely report on lubricating greases.

## Operations Training Guides

Three training guides covering (1) pick-up and delivery, (2) dock and (3) line haul operations are available from the Operations Council, American Trucking Assns. The guides total 118 pages set-up in loose leaf form so any fleet can adapt them to specific operating conditions.

Guides were prepared under the direction of R. J. Ehrhardt, industrial relations director, McLean Trucking Co. They represent the actual experiences of several leading truck fleets.

Presented are job descriptions, preparation of forms and reports, procedures for shipment handling, loading methods, safety factors, etc. Guides can be ordered from Operations Council, American Trucking Assns., 1424 Sixteenth St., N.W., Washington 6, D. C. Price is \$10 to non-members, \$7.50 to members of the Council.

## Urban Freeway Analysis

"What Freeways Mean to Your City" is the title of a king-size, 48-page analysis of the advantages of freeways in solving city traffic problems. It was prepared by the Automotive Safety Foundation.

It reports on the freeway experience of some 15 cities, including such subjects as safety, traffic volume, time saving, property values, business, industrial and residential development, and other factors. The report also considers the high cost of freeways and the question of whether or not they pay.

If your trucks are battling an urban congestion problem, you might write the Automotive Safety Foundation, 200 Ring Bldg., Washington 4, D. C., and ask about this publication.

(FOR RECENT MANUFACTURERS' LITERATURE, SEE PAGE 114)

Milam & Sproule Trucking, Inc., Streator, Illinois, operating trucks in all kinds of service—over the road and local—uses only STANOLUBE HD-M Motor Oil.



## Milam & Sproule Trucking, Inc. finds one oil for all service

*STANOLUBE HD-M Motor Oil replaces several lubricants . . . simplifies maintenance, reduces inventories, improves operations.*

Nye Milam (left) and Ray Elgas, Standard Oil automotive lubrication specialist discuss lubrication. Ray Elgas has been working with truckers on automotive lubrication for more than 12 years. Ray attended the University of Nebraska and is a graduate of the Standard Oil Automotive Sales Engineering School. Customers find this experience and training pay off for them.



### Quick Facts About STANOLUBE HD-M Motor Oil

1. STANOLUBE HD-M Motor Oil is refined from high quality, solvent extracted base stocks.
2. STANOLUBE HD-M contains specialized additives that prevent bearing corrosion, reduce piston varnish and keep rings free to seal against blow-by.
3. STANOLUBE HD-M contains still other additives to reduce wear, prevent damage to cams, tappets and other heavily stressed parts.

All types of hauling are done by Milam & Sproule Trucking, Inc., Streator, Illinois. Some units in local, short haul service have a considerable amount of idling time with resultant low crankcase oil temperatures. Other units hauling maximum loads on tight schedules, in over-the-road service, experience extremely high oil temperatures. STANOLUBE HD-M Motor Oil has proved suitable for all trucks.

Before accepting a Standard Oil automotive engineer's recommendation to install a single motor oil in all units, Milam & Sproule Trucking, Inc., employed several motor oils. The type of oil depended upon the service in which the truck was used. Standard Oil automotive engineers, working with Milam & Sproule maintenance men, developed a five point program:

- 1 Established an effective PM system.
- 2 Set up a drain program for all units.
- 3 Raised low crankcase temperatures by using proper thermostats.
- 4 Set up driver education program with emphasis on harmful effects of extended idling.
- 5 Adopted a single motor oil for all units—STANOLUBE HD-M.

Major overhaul time has now increased to well over 100,000 miles. Valve life has practically doubled. Oil inventories are reduced and misapplication hazards eliminated.

Standard Oil automotive lubrication specialists will perform this service for you. One of these Standard men is near you in any of the 15 Midwest and Rocky Mountain states. Call him. Or write Standard Oil Company, 910 S. Michigan Ave., Chicago 80, Ill.

**STANDARD OIL COMPANY**  
(Indiana)





# NEW

# PRODUCTS

THE LATEST DEVELOPMENTS IN PARTS, ACCESSORIES, TOOLS AND EQUIPMENT FOR THE FLEET FIELD, DESCRIBED IN BRIEF FOR YOUR CONVENIENCE

## P1. Lift Gate

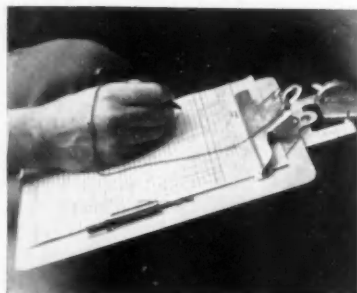
Anthony Co., Streator, Ill. announces a lift gate with loading area of 82 x 30 in. and a lifting capacity of 1000 lb. One hydraulic cylinder does the lifting and lowering and is powered either by a battery driven pump or a power take-off and pump combination. Lifting and lowering are controlled by one lever from either side of the truck. Gate stops automatically at ground and truck floor levels or can be stopped and held at any intermediate height.

## P4. Brake Lock

Sepeco, Inc., Mankato, Minn., announces a brake lock for hydraulic brakes. Included is a dash control unit and a valve unit that attaches to the master cylinder. It operates by stepping on the brake pedal to hold the hydraulic brake on.

## P5. Vehicle Desk

Product Development Corp., Norwalk, Conn., is producing a vehicular desk. Flexible and adjustable, it measures 8 x 12 in. It is of aluminum construction with 1-in. deep basket welded to underside. Desk easily slips off "U" mounting bracket so that driver may take into point of delivery.



## P2. Liquid Detergent

Oakite Products, Inc., New York City, announces a new, concentrated liquid detergent, called "Oakite Liquid-Det." This detergent, which contains no soap, is said to go into solution instantly and to develop copious suds, in hard or soft water, hot or cold, and then to penetrate or loosen the most common soils in a short time. Further, the company states it can be used repeatedly without rinsing and without causing any build-up of film or discoloration.



## P6. Emergency Valve

Velvac, Inc., Milwaukee, Wis., announces a new emergency valve which enables the driver of an air tractor pulling a vacuum trailer to apply the trailer brakes regardless of failure in the air system of the tractor or other brake controls. It meets the new ICC brake regs. With this valve emergency brakes on vacuum trailers can be applied by hand, released if the driver wishes to move and re-applied without the driver leaving the cab.

## P7. Oil Filters

Refill Filter Co., Newark, N. J., announces a line of oil filter replacement cartridges that are backed by a written factory-bonded guarantee for 5000

## P3. Rider Recorder

Robert E. Tompkins, Inc., Rochester, N. Y., is making the "Attendicorder," a new device for keeping the attendance of children on school buses. The "Attendicorder" perforates a paper in the operation, thus automatically registering the pupils that are present. It comes in two models: one to take care of a bus load of 80, and the other to take care of a load of 100 pupils. The unit is small and compact, being approximately eight inches square.

miles or its hourly equivalent. The heavy-duty type oil filter is produced in three styles . . . can, sock and micron, for every type of engine, gasoline or diesel. Filters are designed with a 2-way purifying action to (1) filter microscopic abrasive particles of metal, dirt and soot, and (2) absorb contaminants in the crankcase oil.

## P8. Rocker Arm Facer

Storm-Vulcan, Inc., Dallas, Texas, announces the Model No. 911 rocker arm refacer which resurfaces rocker arms to original factory finish and accuracy. One of the features of this machine is that it requires no special power unit. The grinding wheel is driven with any ordinary valve seat grinder, electric drill or impact wrench.

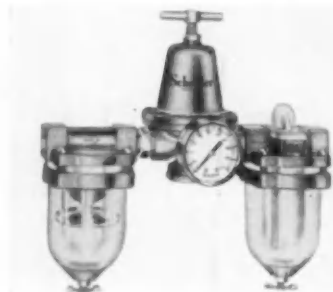


### P9. LP Gas Filter

Century Gas Equipment Co., Paramount, Cal., announces a compact LP gas strainer fuel lock unit. "Fuelock" is mounted in a smaller sediment bowl to provide a more compact unit suitable for installation on lift trucks and tractors where space is at a premium. Valve at the top of the strainer bowl operates by a magnet and locks off the gas line when ignition is turned off. The strainer assembly within the bowl includes felt and chamois filter elements and brass screens.

### P11. Automotive Paint

Acme Quality Paints, Inc., Detroit, announces a new type of air-dry enamel for trucks that dries faster than any previously known enamel. Acme claims a painter can put on two coats in just under 30 min with drying time about 20 min. The product is sprayed at lower air pressure than has been the practice with conventional enamel. The company recommends a pressure of 40 to 50 lb at the gun. The product is reduced 33 1/3 per cent and applied in two or more coats.



### P14. Air Regulator

A. Schrader's Son, Brooklyn, N. Y., announces its new "Lub-air-ator"—a combination air filter, regulator and lubricator. It is fully automatic, can be cleaned and serviced without being removed from the pipe line. The filter unit has a sintered bronze filter, baffle plate and drain cock for blowing out water and foreign matter. The regulator adjusts air flow from 250 psi inlet pressures down to 5 to 125 psi. "Sight feed" permits users to see if oil is flowing in desired quantities.

### P15. Battery Tester

Christie Electric Corp., Los Angeles, Cal., introduces a new, simplified, 12-volt battery tester. This unit

### P10. Vise

De Wilde-Jones, Inc., San Francisco, Cal., introduces a universal screw vise that clamps around tapered or irregular objects. Its jaws consist of a series of flat plates that hinge or swivel into any desired position to coordinate with the shape of the held object. By turning the main screw, the locking jaws position themselves and can then be locked to retain their directional position. Vise is manufactured in three sizes with jaw capacities of 1 1/2, 2 1/2 and 5 in.



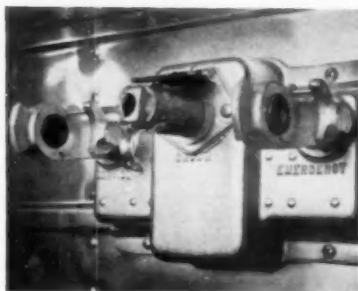
### P12. Marker Light

R. E. Dietz Co., Syracuse, N. Y., is introducing a new armored clearance-marker light with easy cleaning and interchangeable lens. Fresnel-type lens has its prisms on the inside, is smooth outside. Available in either red or amber, the lenses are interchangeable for most similar armored clearance-marker lights. The light has a 3 cp bulb and is available in either 6 or 12 volt systems. The wiring assembly uses a rubber compression grommet to eliminate corrosion.

automatically compares three cells of a 12-volt battery against the other three cells in a sensitive bridge-circuit. The degree of unbalance between cells is registered on the dial, with the meter reading either "Good" or "Bad."

### P16. Trailer Pan

Brown Trailers, Inc., Spokane, Wash., offers a trailer air and electrical pan with seven-circuit, color-coded wiring system and automatic circuit breakers. The circuit breakers kick out if overload or short circuit should occur. They reset automatically and continue to kick-out and reset until the overload or short-circuit is eliminated. Pan, with plug inserted, is automatically locked in po-



### P13. Battery Chargers

Allen Electric and Equipment Co., Kalamazoo, Mich. announces a new line of 6/12 volt battery chargers. Line is comprised of six models: three portables and three wheel-mounted chargers. All models are combination 6/12 volt chargers with complete circuit breaker protection against shorts, reversed connections, and overloads. Other features include heavy-duty transformers, direct air blast ventilation, full-wave selenium rectifiers and automatic mechanical timers.

sition by the outlet cap. It cannot be accidentally pulled out and break the circuit.



### P17. Brake Diaphragms

Thermoid Company, Trenton, N. J., announces introduction of a new series of neoprene-nylon air brake diaphragms designed for clamp-type air brake chambers. Special construction features are included to prevent oil deterioration, reduce possibility of fatigue cracks and other failures. The neoprene is reinforced by heavy-duty nylon fabric which increases tensile strength and gives additional resistance to failure due to constant flexing action. Neoprene also resists the deteriorating effects of heat from nearby exhaust pipes.

(TURN TO PAGE 56, PLEASE)

## Bigger payloads

# One of 9 reasons why fleets find International Trucks cost least to own!

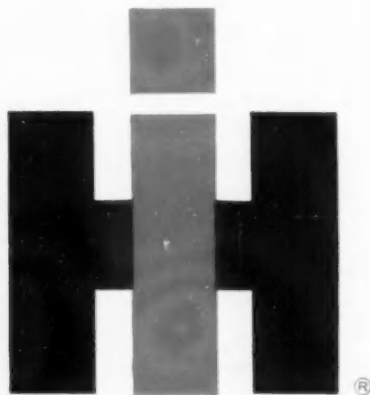
What cuts your hauling cost the most? Bigger payload? INTERNATIONAL Trucks have it with lightweight construction wherever practical to let less metal do more work. With models that give you shortest possible BC dimensions.

The reason is one simple, sound INTERNATIONAL policy: to build trucks that do the job better, do it longer, do it at lower cost than any other make—to spend more to build it so it costs you less to operate.

They do cost less to own, and fleet cost records prove\* it. That's why fleet operators have bought more INTERNATIONALS than any other heavy-duty truck for the past 24 straight years.

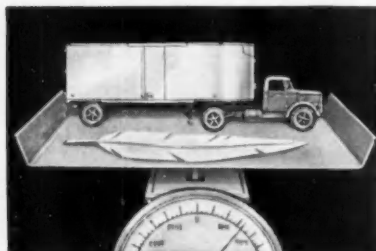
The way to start piling up payloads, and trimming costs, is to talk trucks with your INTERNATIONAL Dealer, today. He's right at the other end of your phone.

*\*Signed statements in our files, from fleet operators throughout the U.S., back up this statement.*

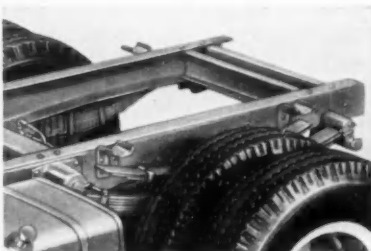


INTERNATIONAL HARVESTER COMPANY, CHICAGO

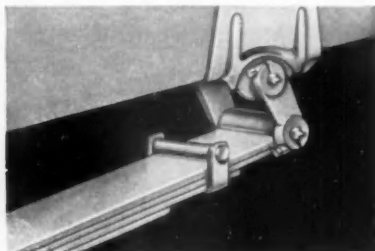
Builds Motor Trucks • Crawler Tractors  
Construction Equipment • McCormick®  
Farm Equipment and Farmall® Tractors



**1** Hundreds of extra payload pounds are yours with lightweight construction that makes less metal do more work. Models available with aluminum frame and other weight-saving components. Space Saver cab for still more payload.



**2** Rugged frame has plenty of sturdy crossmembers. Non-crystallizing, cold squeezed rivets are used for extra rigidity and proper flexibility on all types of service. Husky front and rear sections add to the safety margin built into every frame.



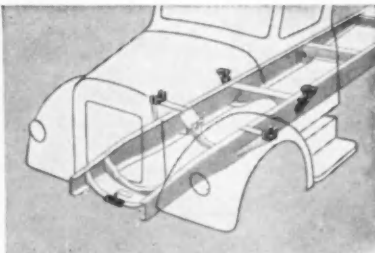
**3** Cradle action front and rear springs cushion load and driver. Proper design and mounting provide better load support, smoother riding and longer spring life. Rear-shackled front springs for greater stability and increased life.



**4** Full air brakes are standard or available on most models with lining areas to match the model, load and operating conditions. Twin-cylinder self-centering, self-energizing hydraulic brakes provide safer, easier stops and longer life.



**5** Safer, easier steering and greater maneuverability result from cam and twin lever gears with controls mounted ahead of front axle. Steering wheel is comfortably positioned. Power steering available on most models.



**6** For cab comfort and long life. Quiet, level ride without transmitting stress to cab, fenders, hood or radiator is the result of wide spaced, rear shackle type mountings in an exclusive INTERNATIONAL 5-point rubber-insulated V-8 cab suspension.



Only INTERNATIONAL builds tractors exactly right for your own over-the-road operation . . . "sized," powered and geared to save you, earn you more money. Roadliner® models have 29,000 lbs. to 76,800 lbs.

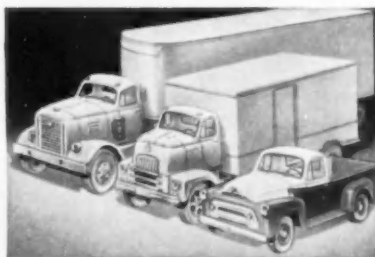
GCW with engines that produce up to 356 hp., famous 6's and three great new heavy-duty V-8's. You name the job, INTERNATIONAL has the tractor that will do it—profitably.



**7** International rear axles and transmissions are offered in hundreds of variations to provide the right capacity and proper final drive ratios for every hauling job . . . a matched combination that reduces road time and operating costs.



**8** Most powerful, most economical V-8's under any truck hood—206, 226 and 257 hp. for faster acceleration and higher average road speeds with less shifting. More miles per gallon of gasoline. Other gasoline, LPG and diesel engines up to 356 hp.



**9** World's most complete line. There is an INTERNATIONAL "tailor-made" for every truck job, ½ tonners to 90,000 pounders. Choice of 4-wheel, 6-wheel and all-wheel-drive models, conventional and COE design. Every one built to cost least to own.



# NEW

## PRODUCTS

THE LATEST DEVELOPMENTS IN PARTS, ACCESSORIES, TOOLS AND EQUIPMENT FOR THE FLEET FIELD, DESCRIBED IN BRIEF FOR YOUR CONVENIENCE

Continued From Page 53

### P18. Cargo Heater

Preco, Inc., Los Angeles, Cal., announces a portable, automatic cargo heater which produces up to 8000 Btu



per hour for protection of perishables in trucks and trailers. This heater meets all ICC requirements and may be quickly installed or removed, requires no outside vents and is said to produce no poisonous gas or fumes detrimental to either produce or humans. It burns methyl alcohol and will operate 40 hr on full flame and 500 hr on pilot. A handy dial on the heater can be set to control the temperature from 30 to 60 deg F, irrespective of altitude or atmospheric pressure. Construction of the heater provides protection in the event it is damaged or overturned. It is equipped with tip-over safety valves that prevent leakage of fuel should the heater be tipped 30 deg.

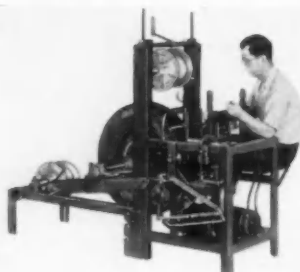
### P19. Engine Tester

Auto-Test, Inc., Chicago, Ill., announces an engine tester called "Auto-Test CAT-5." Unit is light in weight, 6 x 5 1/4 x 2 3/4 in., with case of black

moulded Bakelite. The meter dial is protected by a clear, non-breakable plastic. The tachometer scale ranges are from 0-1000 and 0-5000 rpm. The unit tests cam angle and engine rpm on 4, 6, and 8-cyl engines, 6 and 12-volt systems. It is designed to pinpoint such defects as burned or pitted contact points, defective breaker plates and point bounce or shift.

### P20. Tire Groover

Ballak and Co., St. Louis, Mo., has announced the development of a "Vari-Matic Groove-Master." This tire groover handles tires up to 12 x 24 in. Mechanism controlling the



groove blade enables cutting new grooves in a smooth tire, recut grooves in a worn tire, cut small feather edge zig zags, cut any width or length or depth desired, duplicate, follow or retrace the deepened original wavering treads. A ramp and kick-out lever allows one man to load and eject larger truck tires.

### P21. Tubeless Sealant

O. K. Service Supply Co., Littleton, Colo., announces its "Ne-Gah" tubeless tire sealant. Sealant is a quick drying liquid compatible with cord and rubber to stop or prevent air seepage.

### P22. Cleaning Machine

Storm-Vulcan, Inc., Dallas, Texas, announces a new parts and engine block cleaning machine which has four motor-driven impeller-type agitators mounted on the sides of the tank. This method of impeller mounting is to allow the full force of agitation to reach each corner and surface of parts being cleaned. Other advantages claimed are the increase of solution life to four times normal use, faster cleaning, and the complete freedom from grit, metal particles and contaminants in the oil lines and cavities of parts and blocks. The inside working area of this machine is 72 x 36 in. with a solution depth of 36 in.

### P23. Air Wrench

Ingersoll-Rand Co., New York City, announces a new "Impactool." This new addition to the Ingersoll-Rand line of automotive air impact tools increases the speed and reduces the time required for many maintenance jobs, such as tire switching, tube inspection, spring repairs, etc. It has ample power to handle wheel nuts.

### P24. Engine Preheater

Phillips Mfg. Co., Inc., Minneapolis, Minn., announces an engine preheater engineered to give quick and easier starting in below zero temperature. The unit incorporates an improved heavy capacity extruded element to assure rapid warm-up and long life. Circulating coolant within 20 sec, the



heater moves warm water freely through the entire block and into the cab heater. Designed to operate off any 115 volt AC-DC current supply, it is rated at 850 (standard) and 1300 (heavy duty) watts.

(TURN TO PAGE 60, PLEASE)



# TDA® BRAKES

*if it moves...we can stop it*



## longer life with genuine factory brake replacement parts

Only genuine factory replacement parts are a true match in quality for the original equipment. A major reason for Timken® brake superiority is the care and precision with which every part is produced. These same exacting standards assure equal superiority in Timken-Detroit® brake replacement parts. Each TDA replacement part is rust-proofed, heat-treated or conditioned as required to meet original equipment specifications. This assures the same long-lasting, trouble-free service as the original part.

**Save on man-hours and maintenance!** All TDA factory replacement parts are identical with the original. This assures "original equipment fit" for every installation... makes certain replacement is fast and easy.

©1956, R S & A Company

Remember, only the authorized dealer or branch of your original equipment manufacturer is equipped and qualified to supply you with the genuine high standard replacement parts you need for efficient maintenance.

For expert consultation on any brake problem, contact the Timken-Detroit Brake Division. A staff of experienced engineers is ready to assist you without cost or obligation.

**For every industrial, agricultural or automotive application  
where braking is required.**

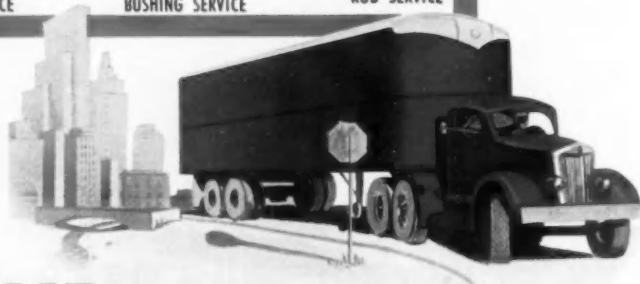


TDA Plants at: Detroit, Michigan • Oshkosh, Wisconsin • Utica, New York  
Ashtabula, Kenton and Newark, Ohio • New Castle, Pennsylvania

# FOR POWER... FOR PROFIT



To make a profit you've got to keep your trucks on the road and out of the repair shop. That calls for dependable Chrome Control Leak-Proof piston rings and McQuay-Norris parts. They're built to last!



## CHROME CONTROL LEAK-PROOF

### PISTON RINGS

This set will outperform any other piston ring set in the "hard-to-hold" jobs regardless of kind, design or price.



**McQUAY-NORRIS MANUFACTURING COMPANY**

• **ST. LOUIS - TORONTO**



Akron Terminal Manager, William Shuey, points to extra payload with aluminum trailer.

## New Roadway Express trailers pay for themselves in four years



Roadway Express, Inc., third largest U. S. trucking firm, is converting to aluminum for an entire fleet of 1,700 van trailers. Maintenance Director, W. E. "Bud" Larkin, cites the reasons: Weight savings, translated directly into extra payload, make up the added first cost in ten to twelve months and the total cost in four years. Resistance to corrosion eliminates both the \$80 to \$120 paint job and the \$400 cost of floor level repairs previously needed every three years. Finally, aluminum vans outlast carbon steel by five to seven years.

## Alcoa Aluminum makes the big difference

Your Guide to the Best  
in Aluminum Value



**THE ALCOA HOUR**  
TELEVISION'S FINEST LIVE DRAMA  
ALTERNATE SUNDAY EVENINGS



To build these new Roadway Express trailers, Trailmobile, Inc., chose aluminum from Alcoa, for 68 years a pioneer in development of alloys that combine light weight with high strength and corrosion resistance. It's a combination that has also prompted Roadway Express to switch to aluminum for all straight-body trucks. To learn how Alcoa® Aluminum can serve your fleet, write for *The Road to Payload Profits*, filled with facts you can use. ALUMINUM COMPANY OF AMERICA, 1876-M Alcoa Building, Pittsburgh 19, Pennsylvania.

# NEW

## PRODUCTS

THE LATEST DEVELOPMENTS IN PARTS, ACCESSORIES, TOOLS AND EQUIPMENT FOR THE FLEET FIELD, DESCRIBED IN BRIEF FOR YOUR CONVENIENCE

Continued From Page 56

### P25. Two-Way Radio

Allen B. Du Mont Laboratories, Inc., Clifton, N. J., announces a new two-way radio, Model No. MCA-110-B. It is a vibrator powered unit which offers 60 to 75 watts across its entire frequency band—25 to 54mc. It is designed for use with either 6 or 12 volt systems.

### P26. Grease Cartridge

Standard Oil Company of California, San Francisco, Cal., announces a recently improved 12-oz cartridge for RPM automotive grease, designed



for faster, simpler and cleaner loading of grease guns. It's a Saran-enclosed "grease sausage." When loading, the contents of the package can be stripped directly into the gun barrel or the entire sausage may be inserted into the gun. With the latter system, the top of the cartridge is punctured or cut off, the head of the gun is replaced and the unit is ready for lubing.

### P27. Alignment Kit

Weaver Mfg. Co., Springfield, Ill., is introducing its new "Twin Post" lift wheel alignment outfit. Outfit consists of a twin post lift, two 3-way alignment gages, toe gage, pair of turning radius gages, portable wheel alignment tester, pair adjustable

wheel chocks, and alignment equipment board. Utilizing the Lift instead of a "rack" or "pit", this equipment can be used—when not in use for alignment service—for lubrication and mechanical service; for instant camber reading; fast reading for king-pin inclination, caster and turning radius; fast and accurate direct "toe" reading; fast and accurate caster and camber correction; and to correct "toe." Shops already equipped with late model twin post lifts need not buy new lifts. It is only necessary that the lift be equipped with current model front post saddle having a width of 35½ in. and equipped with Model No. 1912 adapters.

### P28. Reefer Insulation

Armstrong Cork Co., Lancaster, Pa., has a rigid, foamed plastic insulation board said to combine light weight and moderate cost with relatively high compressive strength and high insulating efficiency. In refrigerated truck and trailer bodies, and in refrigeration equipment, the new material, Armalie, is designed to cut



gross weight with an increase in insulating effectiveness. It is applied by the cold erection method, using an adhesive.

### P29. Engine Kits

Salsbury Corp., Los Angeles, Cal., has developed three diesel engine reconditioning kits, developed especially for repairing cracked Cummins and GMC diesel cylinder heads. These three new kits are designed to recondition all Cummins NH & HB, and GMC series 71 and 110 diesel heads.

### P30. V-8 Head Jig

Storm-Vulcan, Inc., Dallas, Texas, now offers its Model No. 85 cylinder



head milling machine equipped with special holding fixtures for milling head surfaces and manifold pads on OHV V-8 engines.

### P31. Portable Brake Kit

Barrett Equipment Co., St. Louis, Mo., is offering a portable rack for all models of Barrett "Brake Dokters." Unit has a perforated back for hanging the "Brake Dokter," "Drum Check-R" and other tools needed in the servicing of brakes, a tray for attachments, and rubber tired wheels.

### P32. Vehicle Muffler

Alexander-Tagg Industries, Inc., Hatboro, Pa., announces an all-welded heavy gage, steel, gas engine truck and bus muffler said to offer minimum back pressure and silencing well under the trucking industry's maximum permissible 125 sone noise level. They are custom specified to the cubic inch displacement of the engines in trucks made up to and including 1956.

(TURN TO PAGE 106, PLEASE)

*Thanks, Mr. Lorin, for  
these kind words!*

## SIoux FALLS TRANSIT, INC.

TELEPHONE 4-5628 • 100 SOUTH FRANKLIN AVE., SIOUX FALLS, S

Howard Falen Oil Company  
512 East 13th Street  
Sioux Falls, South Dakota

Dear Howard:

We have used Phillips 66 Heavy Duty Motor Oil  
in our transit buses going on two years.

When we first started using this oil, we  
installed a new Ford engine in Bus No. 49.  
Recently we dismantled this engine, after  
it had run 93,966 miles. We found very  
little sludge, block wear was .020, bearing  
wear .008 and the rings were in good shape.  
We believe this engine could have run  
another 25,000 miles.

We believe that Phillips Petroleum Company  
should be complimented on developing this  
remarkable motor oil that helps bus  
operators save operating money and prolong  
the life of equipment.

Our buses operate 2,400 miles a day using  
Phillips 66 products and we find them  
satisfactory in every way.

Sincerely,  
SIoux FALLS TRANSIT, INC.

*H. H. Lorin*  
H. H. Lorin, General Manager



H. H. Lorin, general manager,  
Sioux Falls Transit, Inc., Sioux  
Falls, South Dakota, wrote let-  
ter at left to Howard Falen,  
Phillips distributor in that city.



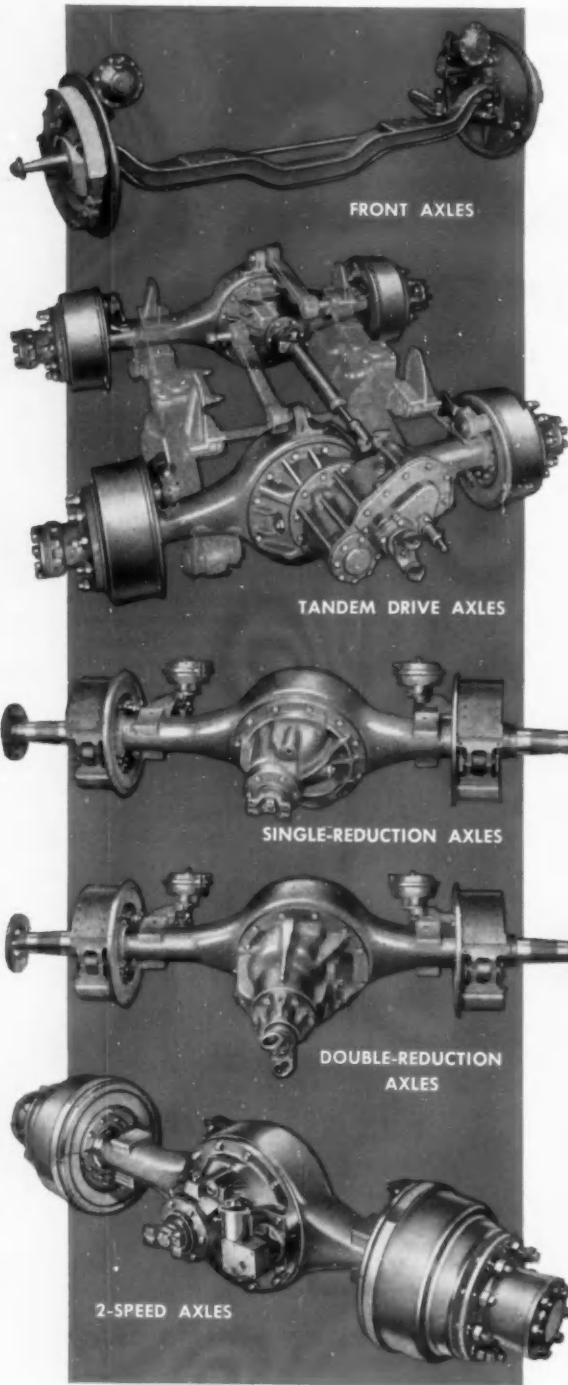
Take a tip from Sioux Falls Transit and get performance that counts  
in more operating profit. A Phillips 66 lubricating engineer will be  
glad to assist you, free of charge. Write: Sales Department, Phillips  
Petroleum Company, Bartlesville, Oklahoma.

*It's Performance That Counts!*



# PHILLIPS 66 HEAVY DUTY MOTOR OILS





FRONT AXLES

TANDEM DRIVE AXLES

SINGLE-REDUCTION AXLES

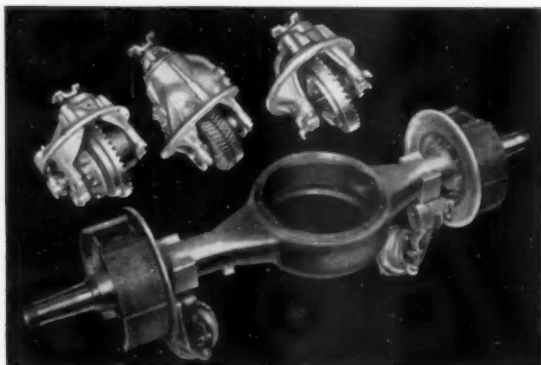
DOUBLE-REDUCTION AXLES

2-SPEED AXLES

# EATON AXLES

**Outstanding  
Performance Cuts  
Hauling Costs, Assures  
Longer Vehicle Life**

Strict adherence to exacting quality standards, the most modern of production procedures, and important design advancements developed through Eaton's years of axle experience, combine to offer the truck operator axles with many worthwhile benefits. Eaton Axles, engineered for rugged stamina, keep trucks on the job, hold down operating and maintenance costs, and deliver more vehicle miles at lower cost per mile.



This rugged housing, used in famous Eaton 2-Speeds, is also used for Eaton single-reduction and double-reduction axles. The three types of heads are interchangeable.

# EATON

— AXLE DIVISION —  
MANUFACTURING COMPANY  
CLEVELAND, OHIO



**PRODUCTS:** Sodium Cooled, Poppet, and Free Valves. Tappets. Hydraulic Valve Lifters. Valve Seat Inserts. Jet Engine Parts. Rotor Pumps. Motor Truck Axles. Permanent Mold Gray Iron Castings. Heater-Defroster Units. Snap Rings. Springtites. Spring Washers. Cold Drawn Steel. Stampings. Leaf and Coil Springs. Dynamatic Drives, Brakes, Dynamometers



## NYLON CORD TRUCK TIRES SAVE YOU MONEY 5 WAYS

**1. NYLON MEANS MORE RETREADS.** Because their casings are tougher, nylon cord tires can be retreaded again and again. And every retread stretches your tire dollars . . . brings down costs per mile.

**2. NYLON MEANS FEWER ROAD DELAYS.** Dependable nylon cord tires help you maintain strict schedules and on-time deliveries, save drivers' time and service costs.

**3. NYLON MEANS MORE OVER-ALL MILEAGE.** Tough nylon cords cut down tire failures, give you higher average tire mileage. Nylon virtually eliminates cord failures from flexing, moisture, heat and impact.

**4. NYLON MEANS SAVINGS ON TIRE REPAIRS.** By guarding against every major cause of tire failure—flexing, moisture, heat and impact—nylon cords save you service charges and tire-repair costs.

**5. NYLON MEANS LESS TIRE INVENTORY.** With nylon, you can reduce your tire reserve . . . free your capital for other business needs. Fewer failures and more mileage per tire mean you need fewer spares on hand . . . fewer tires per year.

**NYLON CAN CUT YOUR YEARLY TIRE COSTS.** You'll get more miles per dollar, more profit per load . . . when your trucks roll on nylon cord tires. Ask your dealer about nylon cord tires today. Du Pont makes the tough, long-lasting yarns that are used by rubber companies to make the tires that give extra protection against tire failure. Du Pont does not make tires.



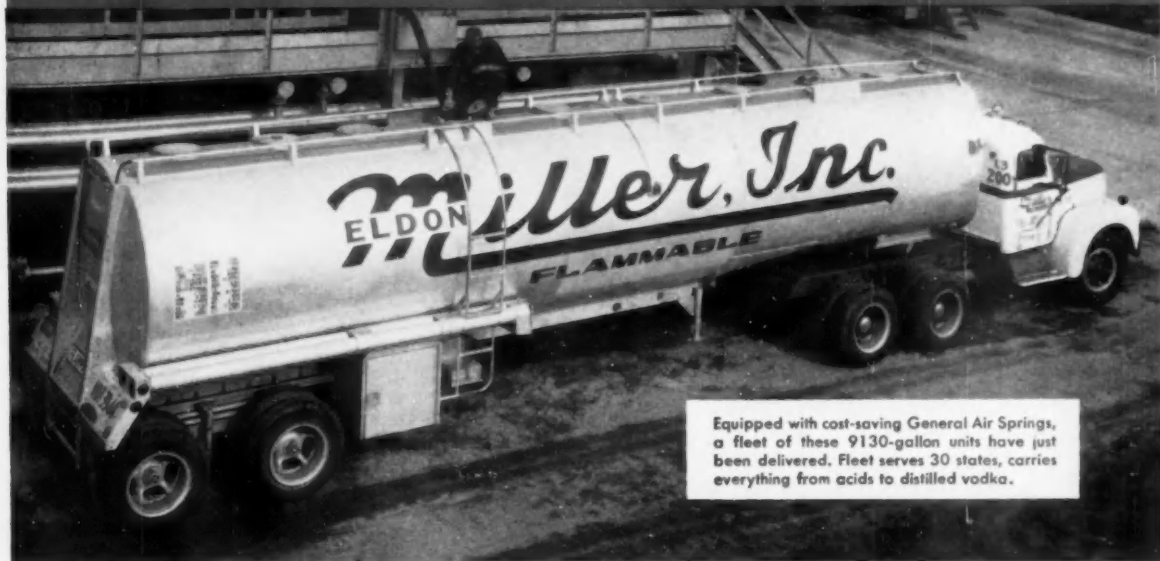
BETTER THINGS FOR BETTER LIVING  
...THROUGH CHEMISTRY



NOW, IN PASSENGER-CAR TIRES, TOO . . . THE STRENGTH AND TOUGHNESS OF NYLON . . . FOR UTMOST SAFETY, SUREST PROTECTION AGAINST TIRE TROUBLE

**ELDON** *Miller, Inc.*  
IOWA CITY, IOWA

**REPORTS:**



Equipped with cost-saving General Air Springs, a fleet of these 9130-gallon units have just been delivered. Fleet serves 30 states, carries everything from acids to distilled vodka.

## "GENERAL AIR SPRINGS

### ARE NOW SPECIFIED ON ALL OUR NEW TRAILER PURCHASES"

Mr. Eldon Miller, president of the firm bearing his name, credits General Air Springs with helping permit greater payloads, increased safety and longer equipment life.

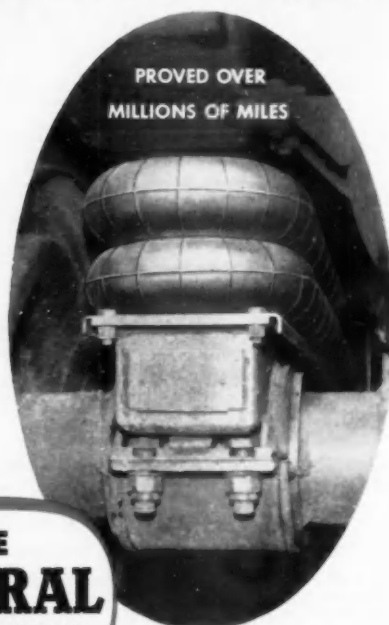
"Our maintenance costs are negligible and we've all but eliminated those aggravating little leaks so common with non-air equipped units," he states. "In addition, we believe General Air Springs are helping us achieve an exceptionally fine accident prevention record."

Find out today for yourself how General Air Springs can help your fleet save more . . . make more.

**Like Eldon Miller, Inc . . . Specify General  
Air Springs On All New Equipment!**

**THE  
GENERAL  
AIR SPRING**

Member of T. T. M. A.



PROVED OVER  
MILLIONS OF MILES

**THE GENERAL TIRE & RUBBER COMPANY • AIR SPRING DIVISION • Akron, Ohio**

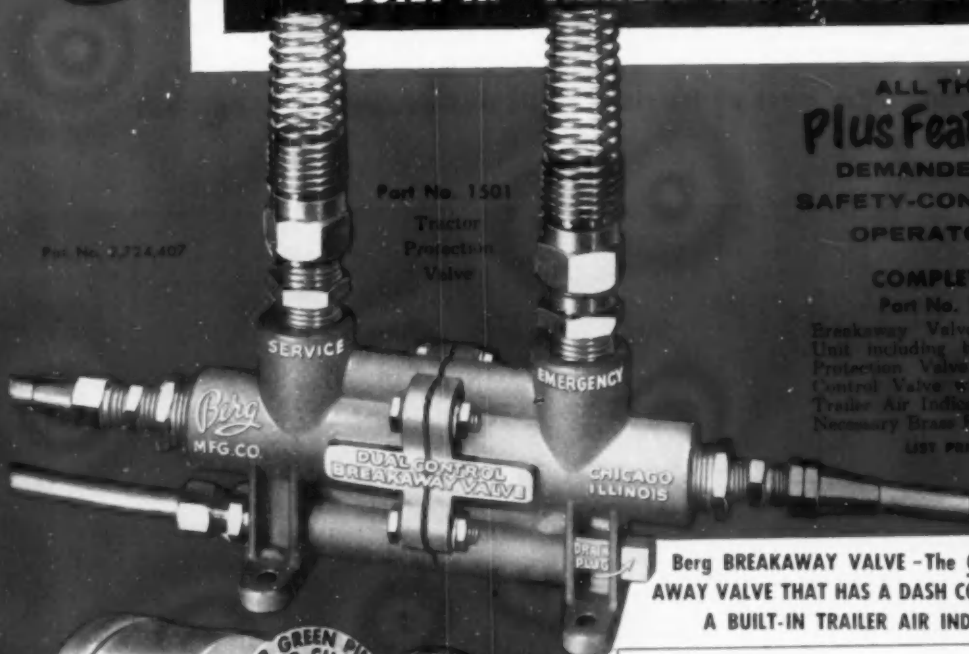
Definitely  
Meets and Exceeds  
**NEW MODIFIED**  
I.C.C. Requirements  
193.43

# NEW! *Berg* SAFETY CONTROL Tractor-Trailer **BREAKAWAY VALVE** with the NEW, EXCLUSIVE "BUILT-IN" TRAILER AIR INDICATOR

Part No. 2,724,407

Part No. 1501

Tractor  
Protection  
Valve



ALL THE  
**Plus Features**  
DEMANDED BY  
SAFETY-CONSCIOUS  
OPERATORS!

COMPLETE KIT  
Part No. 1500JF

Breakaway Valve Complete  
Unit including both Trailer  
Protection Valve and Dash  
Control Valve with Built-In  
Trailer Air Indicator and All  
Necessary Brass Fittings.

LIST PRICE \$34.50

**Berg BREAKAWAY VALVE - The ONLY BREAK-  
AWAY VALVE THAT HAS A DASH CONTROL WITH  
A BUILT-IN TRAILER AIR INDICATOR**



PIN FLUSH  
EMERGENCY  
POSITION



CENTER GREEN  
PIN OUT  
TRAILER  
CHARGED

Green Pin in center of the  
Dash Control Knob auto-  
matically protrudes when  
trailer air system is safely  
charged and the operating  
pressure is adequate for  
safe operation.

Green Pin automatically retracts  
when trailer air is in the emer-  
gency position or should the  
operating pressure be below a safe  
operating level . . . thereby offer-  
ing visual evidence that the trailer  
air system is in emergency position.

The BERG DASH CONTROL VALVE with BUILT-IN  
TRAILER AIR INDICATOR allows the driver to tell at a  
glance whether the trailer relay valve is charged and open  
. . . or if the trailer air system is vented to atmosphere.

Part No. 1505 JF

Dash Control Valve with Built-In  
Trailer Air Indicator and Chrome  
Plated Knob.

**BERG LEADS WITH THE FIRST VISUAL TRAILER AIR INDICATOR . . .**

Prices subject to change without notice.

For Further Information—See your Jobber or WRITE DIRECT TO:

Your  
Assurance of  
the Best is



*Berg*

**MANUFACTURING & SALES CO., INC.**

1712 South Michigan Boulevard

Chicago 16, Illinois

MANUFACTURERS OF TRACTOR-TRAILER ELECTRICAL CONNECTORS, VOLTAGE CON-  
VERTERS, LIGHTING WIRE AND CABLES, LOOM, AIR AND VACUUM BRAKE VALVES AND  
CONTROLS INCLUDING BREAKAWAY, CHECK, SECONDARY CONTROLS, LOW PRESSURE  
INDICATORS AND POWER BRAKE AND COMPONENT PARTS, SHO-GLO LAMPS.

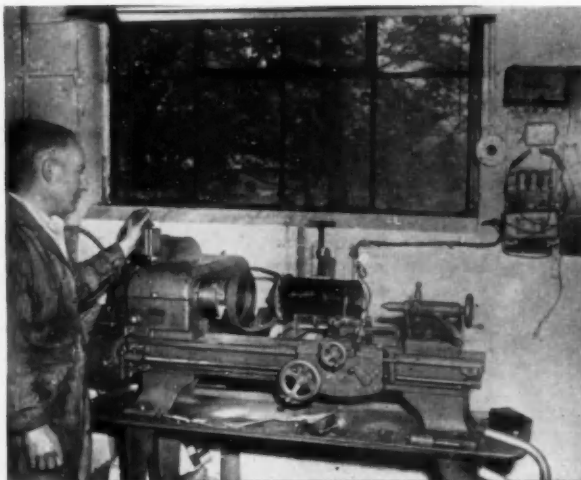
Berg Products are Warehoused in Chicago, Boston, Los Angeles, San Francisco, Portland, Oregon, and in Toronto, Ontario, Canada.



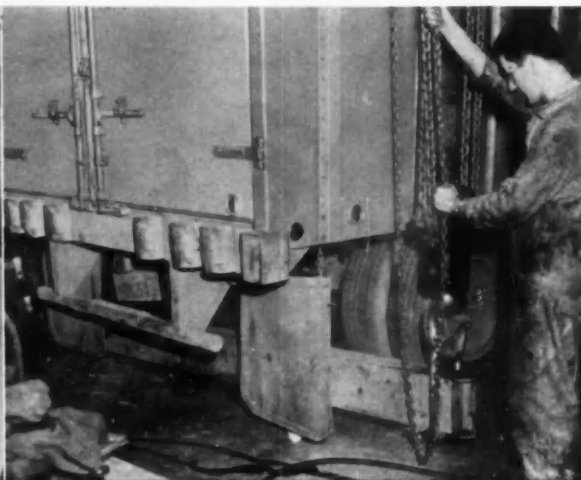
## RED STAR Cuts Costs with

# "Do It Yourself"

Shop staff makes the most of its time, skills and equipment to turn out time-saving

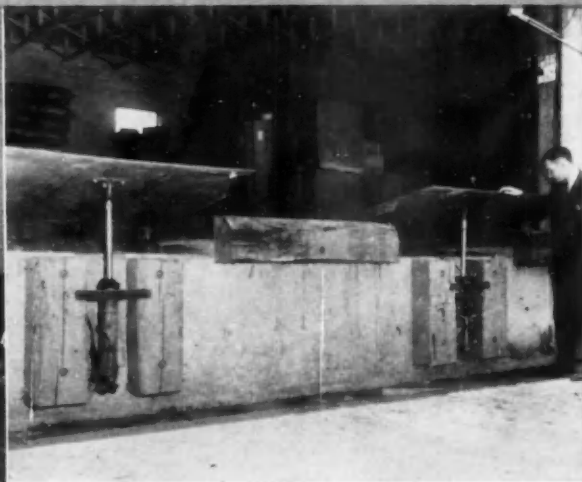
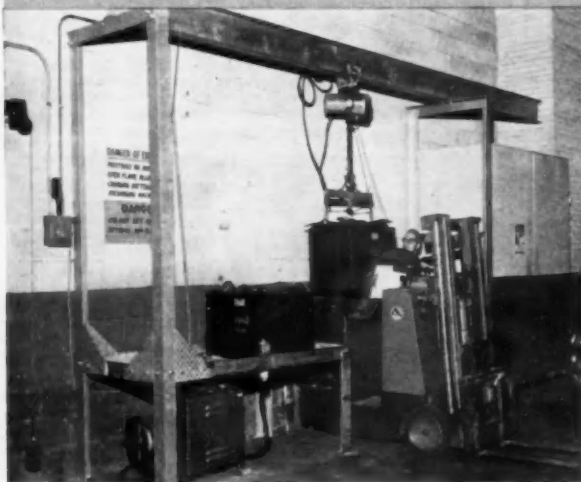


This converted lathe tests rebuilt generators. The generator is mounted in a wall bracket, connected to lathe by belt which passes over wheel in chuck



Chain hoist hangs from heavy I-beam, is used to raise rear-end of fully loaded trailers for rapid spring service or other emergency repairs

Heavy batteries for fork-lift trucks are easily handled with this shop-built hoist. I-beam track is supported by welded and bolted steel frame



Salvaged hydraulic cylinders plus a little ingenuity resulted in these air-operated dock boards. They're used at all the fleet's terminals



# Maintenance

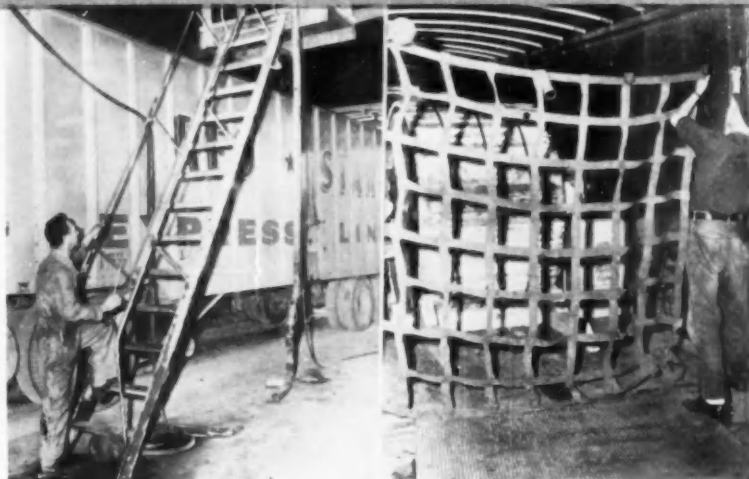
**tools, builds special bodies when needed**



Scrap aluminum sheeting makes an effective cold weather radiator shielding. It is about to be put on to replace screening, used to catch insects in summer

Salvaged trailer posts, floor plates, angles and pipes make up a useful ladder for inspecting trailer roof tops

Old inner tubes supplied rubber grommets to hold this webbed cargo net, made from other salvaged materials



MAKING MAXIMUM use of shop equipment and employees' time and skills is a primary rule of Red Star Express Lines. You see the rule in action when you visit the busy, fully-equipped heavy maintenance center at the fleet's headquarters terminal in Auburn, N. Y.

The Auburn facilities are supplemented by auxiliary maintenance stations in Red Star's upstate terminals at Buffalo, Rochester, Syracuse and Utica, and in its New York City and North Bergen, N. J., metropolitan terminals. But units permanently assigned to these terminals are routed to the headquarters shop for major service after every 20,000 miles of operation.

Consequently some 50 to 60 units are given routine daily service at Auburn and another 10 to 20 come into the terminal's main body shop. Here bodies are completely overhauled, engines and transmissions rebuilt, and trailer panels repaired or replaced. Facilities include a welding station, spring bay, service pits, paint shop, washing and spraying equipment, body shop and unit repair shop.

In addition to keeping the fleet's 575 vehicles in top operating condition, the 40-man crew under maintenance supervisor Stuart Sweet was able to build a number of special straight truck bodies (see page 69) when these were needed to meet the fleet's expansion program, and also has developed and built the time-saving, cost-cutting tools and equipment shown on these pages.

## Generator Tester

A converted lathe is now used to test rebuilt generators in the machine shop. Generator is mounted on a wall bracket, is connected to the lathe by a belt which passes over a wheel mounted in the lathe chuck. Belt tension can be adjusted by slots in the base of the wall bracket, allowing the genera-

(TURN TO NEXT PAGE, PLEASE)

## ... "Do It Yourself" Maintenance

Continued from Page 67

tor to slide back and forth. Testing meters are mounted to right.

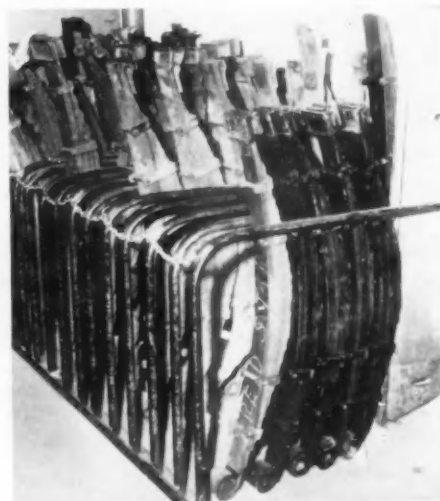
### Trailer Hoist

Red Star can put a trailer, fully loaded, back on the road in minutes instead of tying it up for hours when a broken spring needs replacing or when similar emergency repairs are necessary—with this simple, manually-powered method of lifting the entire trailer rear-end. Chain fall at each end is used to do the lifting in the Auburn shop's spring bay. Unit hangs from heavy steel I-beam mounted ceiling-ward.

### Battery Service

With Red Star's dock operations completely palletized, fork-lifts must be kept at top-level performance. Here the problem of charging heavy batteries for electrically-powered fork-lifts is neatly solved. The hoist shown rides an I-beam track, is supported by welded and bolted angle-iron up-rights. The station is compactly

Inch-pipe and hooked chain are combined to make a simple, safe rack for spring storage in shop



designed to require a minimum of floor space.

### Dock Boards

At Red Star, safety is the mother of invention. Illustrated here are two of the air-operated dock "bridges" used throughout the company's seven-terminal network. Hydraulic cylinders salvaged from aircraft landing gear are mounted so they can raise steel ramps to provide a safe, sturdy passage-way for fork-lifts between truck or trailer and dock.

### Radiator Shield

There's no problem of cold feet in winter or bugs in summer for the fleet's drivers. Maximum warmth in tractor cabs as well as warmer engines and easier starting is assured with winter shields cut from scrap aluminum sheeting (in the driver's hand in the illustration) to fit over the radiator.

### Stair-Platform

Lightweight, inexpensive, and easy to assemble, this stairway (TURN TO PAGE 118, PLEASE)

Rubber bands, made from old inner tubes, replace rope for tying down trailer tarpaulins. With no untying needed, they save time over rope fastening

Tees on control board show when tractors and trailers are due for service. Colored tees are used to distinguish home base terminals of the equipment



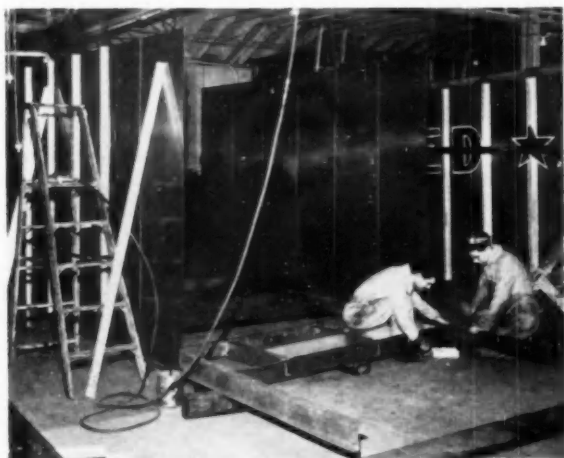
## RED STAR Builds Own Bodies

**V**TO KEEP UP with its terminal expansion program, Red Star Express Lines recently needed 30 additional straight trucks for metropolitan pickup and delivery service. Management assigned the building of the 18-ft bodies to the crew at its maintenance headquarters at Auburn, N. Y., set a quota of one body every three days.

The units were turned out on schedule, during regular working hours, at a cost saving (difference between commercial body builders' prices and the actual cost to Red Star, using its own inventory and salvaged parts and its own labor) of one-third. Since the building program was worked into the shop's regular maintenance work load and required no addi-

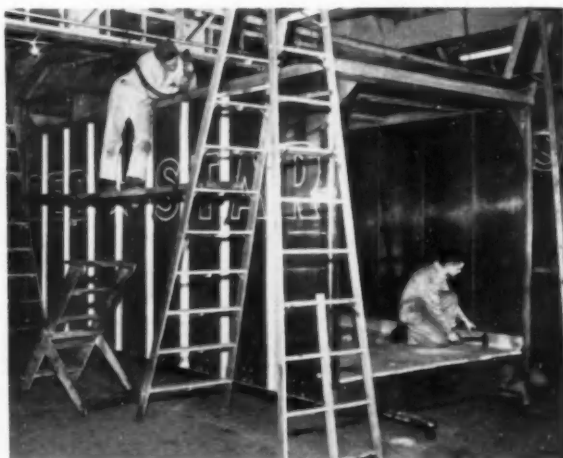
tional personnel or overtime, the direct labor costs were kept to a minimum.

Living up to the fleet's reputation for making the most of available materials, the Auburn shop crew was able to put the first five units together primarily from salvaged parts accumulated from repairs to over-the-road units. Top rails cut off from trailers, for example, were usable on the shorter straight bodies, and bent trailer posts were easily repaired to meet straight truck requirements. Also, all parts such as side panels, cross-beams, wear plates, posts, hardware, etc., are interchangeable among trailer and local units so components for the new units were standard inventory items.



Floor cross beams and vertical posts were pre-cut and drilled. Beams were bolted, posts were bolted to rails, riveted to aluminum panels

Completed body features plywood panels, reinforced boiler-plate floor, pre-assembled tail section welded to rear frame, slope in rear of floor



Carpenter finishes floor while riveter fastens ceiling panels to cross beams. The center ceiling panel is a Coralux skylight for visibility

Ready to roll, the body has been mounted and wiring is completed. The 18-ft bodies have a 1,000 cu ft capacity, are used in city service





# St. Louis Converts Bus to Salt Shaker

**One man operates fleet-designed salt spreader that can spread a 5-ton load of salt in a 12-ft spray at 15 mph**

**V** SNOW AND ICE will be less of a problem this year for St. Louis Public Service. For front line equipment now includes several salt spreaders, converted from Mack GM buses which have outlived their usefulness as passenger carriers. Pictures at right tell most of the story.

With all seats removed, a five-ton steel hopper has been placed

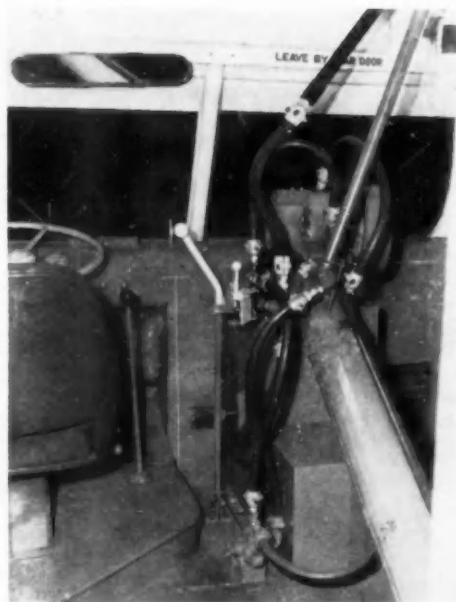
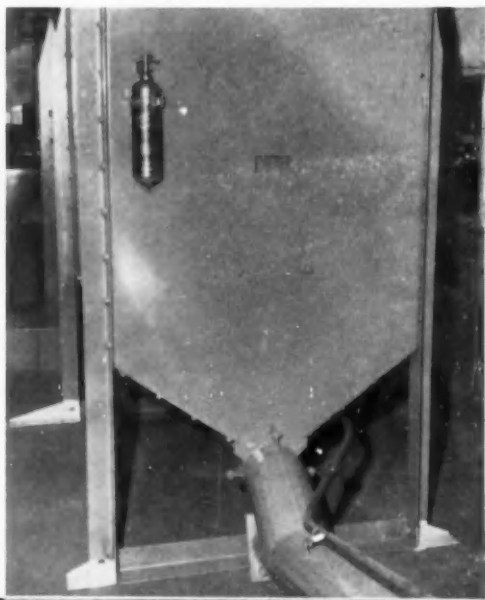
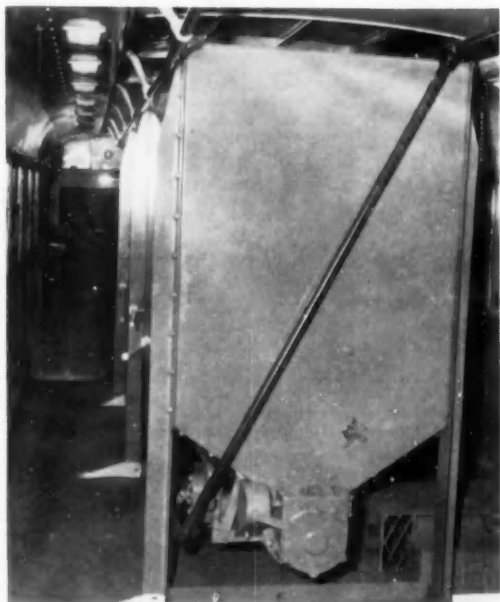
just aft of center to properly proportion the load between dual rear wheel and single front wheels. It is loaded through a weatherproof hatch in the roof. Beneath the center of the tank, which slants in from both sides, is an enclosed worm-type conveyer powered by a hydraulic motor at the rear end. This conveyer feeds directly into a second conveyer angled upward

at approximately 30 deg and feed ing directly into a small hopper at the front of the bus. This is powered by another hydraulic motor at the front end.

## **12-ft Spray**

At the bottom of the small front hopper is a sirocco type fan which blows the salt through a small

(TURN TO PAGE 112, PLEASE)



At top are rear (left) and front (right) views of salt hopper installed in bus body. Hydraulic motor pushes salt through feed pipe with worm-type conveyor to front of bus. Engine-driven pump (center, right) powers this motor as well as two more hydraulic motors at distribution end of spreader. Distribution end (above and at right) has smaller hopper below which is a sirocco-type fan that blows salt through opening in front of bus with a 12-ft wide spray. All controls are adjacent to driver

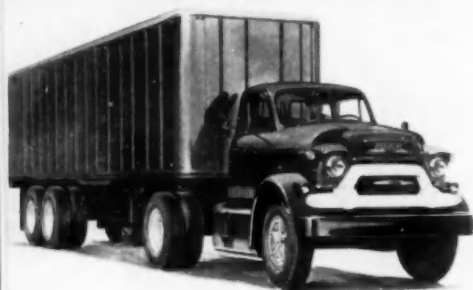


# The NATIONAL TRUCK SHOW



## FORD

Ford's ultramodern Ranchero (illustrated) shares the spotlight with the company's new tilt-cab COE. Both are new for 1957 and rushed to New York for the first public showing. The Ranchero has 1957 Ford passenger car styling to rear of cab, is 16 in. lower and 18 in. longer than the company's 1956 pick-up models. The tilt-cab models run from 18,000 to 30,000 lb GVW, have 1656 in. of glass in windshields.



## GMC

In addition to representative models from its smallest to heaviest line, GMC Truck & Coach Division features its new Model No. DRA-802 highway tractor. Rated at 55,000 lb, this model makes extensive use of aluminum for lighter weight, has air suspension front and rear and is the first to use the new 4-71 T turbocharged diesel engine (171 hp). Gasoline or regular diesel engines are optional.



## REO

Reo's show models place major emphasis on power options. The big COE tandem dump (illustrated) is powered by a 160-hp, LP gas engine. Another features the Reo Gold Comet V-8 developing 235 hp, and a highway tractor (Model No. A603D) has the Cummins 175-hp, turbocharged diesel. Reo is proud of the fact that it has no yearly models, that new units include latest changes and improvements right up to show time.



## MACK

The Bus of Tomorrow is perhaps the most exciting piece in the Mack exhibit. This is Mack's revolutionary new design for city bus operations, includes air conditioning, passenger lounge and many other unusual items. But Mack also gets credit for "largest in show", a 136,000 lb GVW off-highway dump truck (illustrated). Also on hand: A fire engine, and several highway models.



## STUDEBAKER

Studebaker offers at least four models in its show display. They range from the 1/2-ton pick-up to the new 19,000 lb GVW Model No. 3E40. It features the company's 289 cu in. V-8 engine with up to 192 hp. There are four engines in all—two sixes and two eights. Of added interest is the non-slip power dividing differential offered as optional equipment on all 1/2-ton models.

**NOW, as you read this, it's time to visit the truck exhibits in the first National Auto Show in 16 years at the Coliseum, Columbus Circle, New York City, Dec. 8 to 16**

---

#### **WHITE-AUTOCAR**

Four series of highway tractors are in the White display—the familiar 3000 and 9000 series, the new 4000 series (replacing "WC" models) and a light-weight Autocar. Most are available with either Mustang or turbo-charged diesel engines. The straight trucks range from a 14,000 lb GVW city pick-up to a 100,000 lb off-highway monster. Included is a special display, a new 45,000-lb rear axle.

#### **CHEVROLET**

The show provides the first public display of representative 1957 Chevrolet models. In addition, the exhibit features many cutaway and working exhibits such as the big power train display illustrated. Mounted on a tandem axle truck, it shows full size cutaways of four engines, eight transmissions and eight rear axles. Other displays include power steering, front suspension.

#### **WILLYS**

Spot-light of the Willys exhibit is on the all-new forward control Jeep, Model No. FC-150 (see page 82, this issue, and accompanying illustration). Its attractions include 14-wheel drive, exceptional visibility and a load space almost equal to the 81-in. wheelbase. Also in evidence are the Universal Jeep and Jeep trucks and utility wagons shown with a great variety of specialized equipment.

#### **DODGE**

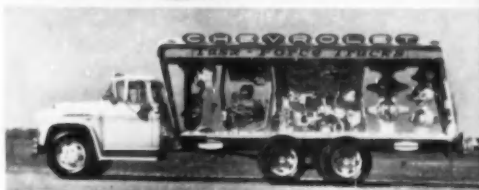
There are seven trucks in the Dodge exhibit. A featured highlight is a D700 chassis and cab, painted solid white, and mounted on a special platform. It has a GVW of 23,000 lb and a GCW of 45,000 lb. There is also a C500 COE model with dairy tank. Other exhibits range from the D100 panel (illustrated) to a big 900 series tandem-axle unit primarily designed for dump truck use.

#### **DIAMOND T**

Diamond T's area, just inside the main entrance, is well filled with three key lines. First is a Model No. 830 tandem-axle dump truck with 501-cu in. gasoline engine. Next, a Model No. 723CJT, the company's tilt-cab, turbocharged diesel road tractor (illustrated). Then for the really big loads is a Model No. 921C. This is also a tilt-cab, primarily for western use, with up to 300 hp (diesel).

#### **INTERNATIONAL HARVESTER**

This exhibit is designed to feature the company's slogan—"Most complete line of trucks in the world." It runs the gamut from a 4200-lb GVW pick-up to a 60,000-lb GVW 6-wheel dumper. Included are several varieties of road tractors with conventional, tilt-cab and sleeper concepts. And a special display will highlight the bogie action of an RF-210 6-wheeler (illustrated here).

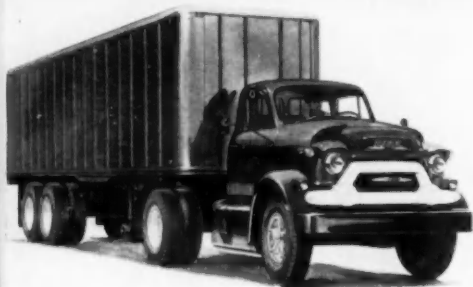


# The NATIONAL TRUCK SHOW



## FORD

Ford's ultramodern Ranchero (illustrated) shares the spotlight with the company's new tilt-cab COE. Both are new for 1957 and rushed to New York for the first public showing. The Ranchero has 1957 Ford passenger car styling to rear of cab, is 16 in. lower and 18 in. longer than the company's 1956 pick-up models. The tilt-cab models run from 18,000 to 30,000 lb GVW, have 1656 in. of glass in windshields.



## GMC

In addition to representative models from its smallest to heaviest line, GMC Truck & Coach Division features its new Model No. DRA-802 highway tractor. Rated at 55,000 lb, this model makes extensive use of aluminum for lighter weight, has air suspension front and rear and is the first to use the new 4-71 T turbocharged diesel engine (171 hp). Gasoline or regular diesel engines are optional.



## REO

Reo's show models place major emphasis on power options. The big COE tandem dump (illustrated) is powered by a 160-hp, LP gas engine. Another features the Reo Gold Comet V-8 developing 235 hp, and a highway tractor (Model No. A603D) has the Cummins 175-hp, turbocharged diesel. Reo is proud of the fact that it has no yearly models, that new units include latest changes and improvements right up to show time.



## MACK

The Bus of Tomorrow is perhaps the most exciting piece in the Mack exhibit. This is Mack's revolutionary new design for city bus operations, includes air conditioning, passenger lounge and many other unusual items. But Mack also gets credit for "largest in show", a 136,000 lb GVW off-highway dump truck (illustrated). Also on hand: A fire engine, and several highway models.



## STUDEBAKER

Studebaker offers at least four models in its show display. They range from the 1/2-ton pick-up to the new 19,000 lb GVW Model No. 3E40. It features the company's 289 cu in. V-8 engine with up to 192 hp. There are four engines in all—two sixes and two eights. Of added interest is the non-slip power dividing differential offered as optional equipment on all 1/2-ton models.

**NOW, as you read this, it's time to visit the truck exhibits in the first National Auto Show in 16 years at the Coliseum, Columbus Circle, New York City, Dec. 8 to 16**

#### **WHITE-AUTOCAR**

Four series of highway tractors are in the White display—the familiar 3000 and 9000 series, the new 4000 series (replacing "WC" models) and a light-weight Autocar. Most are available with either Mustang or turbo-charged diesel engines. The straight trucks range from a 14,000 lb GVW city pick-up to a 100,000 lb off-highway monster. Included is a special display, a new 45,000-lb rear axle.

#### **CHEVROLET**

The show provides the first public display of representative 1957 Chevrolet models. In addition, the exhibit features many cutaway and working exhibits such as the big power train display illustrated. Mounted on a tandem axle truck, it shows full size cutaways of four engines, eight transmissions and eight rear axles. Other displays include power steering, front suspension.

#### **WILLYS**

Spot-light of the Willys exhibit is on the all-new forward control Jeep, Model No. FC-150 (see page 82, this issue, and accompanying illustration). Its attractions include 14-wheel drive, exceptional visibility and a load space almost equal to the 81-in. wheelbase. Also in evidence are the Universal Jeep and Jeep trucks and utility wagons shown with a great variety of specialized equipment.

#### **DODGE**

There are seven trucks in the Dodge exhibit. A featured highlight is a D700 chassis and cab, painted solid white, and mounted on a special platform. It has a GVW of 23,000 lb and a GCW of 45,000 lb. There is also a C500 COE model with dairy tank. Other exhibits range from the D100 panel (illustrated) to a big 900 series tandem-axle unit primarily designed for dump truck use.

#### **DIAMOND T**

Diamond T's area, just inside the main entrance, is well filled with three key lines. First is a Model No. 830 tandem-axle dump truck with 501-cu in. gasoline engine. Next, a Model No. 723CJT, the company's tilt-cab, turbocharged diesel road tractor (illustrated). Then for the really big loads is a Model No. 921C. This is also a tilt-cab, primarily for western use, with up to 300 hp (diesel).

#### **INTERNATIONAL HARVESTER**

This exhibit is designed to feature the company's slogan—"Most complete line of trucks in the world." It runs the gamut from a 4200-lb GVW pick-up to a 60,000-lb GVW 6-wheel dumper. Included are several varieties of road tractors with conventional, tilt-cab and sleeper concepts. And a special display will highlight the bogie action of an RF-210 6-wheeler (illustrated here).



## The Fleet Engineer:

# Now He's Part of Management

**His new authority and duties call for a man of many talents capable of expanding his scope to help solve major problems**

**I**N MANY instances the Fleet Engineer is being invited to join the top management team. This improvement in his position in the company's organization results from management's appreciation of the major contributions the engineer has made to the transportation industry in the past, and from the realization that the engineer's skills and knowledge will be of even greater importance in the future.

Along with raising the engineer to the management team, companies now tend toward broadening his scope and enlarging his area of responsibility and authority. The effect of this trend will perhaps result in engineers broadening their thinking to expand their contribution beyond the limits of their own specialty.

This new concept requires the engineer to have a detailed knowledge of all segments of his com-

pany. He must know its past history, its present policy and the direction of its future development. He will no doubt take part in overall planning of company policies and objectives. He will be high enough in the organization to call upon its other members for information in their particular areas of jurisdiction. He will thus be in a position to integrate his plans or proposals in the overall plan on a sound factual basis.

### Finance: The Major Problem

Perhaps the most important problem facing the Fleet Engineer at this time is that of finance. The transportation department generally must compete with other departments for funds to either replace or increase or keep up-to-date the rolling stock and plant. This is particularly true at the present time, with its tight money market. This means that the Fleet Engineer must now take a long hard look at his policies of acquisition, replacement, and expansion. He must develop and evaluate data to justify his request for money to Management. He must be able to present Management with a clear factual picture of the need for the new equipment, the amount of capital required, the economic life of



**MAN IN THE MIDDLE**



**By Theodore McGill**

**Editors' Note:** While Mr. McGill's remarks were directed specifically to an audience of automotive engineers, they apply equally to the whole field of fleet technical and maintenance managers, including fleet supervisors, maintenance superintendents and a score of other different titles.

the equipment or improvement and the earnings and rate of expected return, and the time needed for the funds to be restored for further investment.

In compiling such data, he must consider known and anticipated cost trends. Among the more important of these are: labor charges, both direct and indirect, (fringe benefits are now substantial item); taxes; material costs; fuel costs and the increased cost of vehicles. Recent changes in the Internal Revenue Code have made it necessary for him to make a careful study of depreciation schedules and methods so that the most efficient system may be used. He should also make a thorough evaluation of the relative advantages and disadvantages of vehicle leasing.

#### **Budgets Can Be Useful**

Another important duty of the Fleet Engineer is the design, installation and administration of a budget control program for his department, and the integration of it with other departments. For effective cost control, he must estimate future costs (based on known cost factors), and then must have adequate records of actual costs to compare them with the estimates. Budgets may be projected on a time basis, ranging daily to monthly, quarterly or annually. In compiling projections of future costs, proper consideration of trends is extremely important. Allowances must be made for such things as an increase in fuel tax, an added holiday, or an increase  
(TURN TO PAGE 94, PLEASE)

#### **HERE ARE OTHER HIGHLIGHTS OF THE**



**T**HE National Transportation Meeting of the Society of Automotive Engineers in October packed a mass of ideas and information for engineers and other fleetmen into its three-day sessions.

The article on the facing page is based on the paper "The Engineer in Fleet Maintenance" by Theodore McGill, Director of Safety for New York City's Department of Sanitation. Summaries of other papers dealing with the current mechanic shortage will be found on page 76.

#### **Braking Tests**

**T**HE REPORT on stopping distances was, in effect, an up-dating of a report originally made by the Bureau of Public Roads in 1941.

Tests conducted by the Bureau during 1955 showed that, except for two types of vehicles, the improvement in braking ability in recent years was considerably less than it was between 1942 and 1949—period of the first tests. Conclusion drawn from this is that the wide range of stopping ability of various vehicle types will not be appreciably reduced in the near future, and must be considered as a significant factor in highway design, vehicle regulations and driver training activities.

The tests showed 38 to 64 per cent of the largest combination vehicle types and about 80 per cent of the three and four-axle truck-tractor, semi-trailer combinations and three-axle trucks were capable of complying with the Uniform Vehicle Code specification of a 50-ft stop from 20 mph. As many as 84 per cent of each of the two classifications of two-axle trucks and 92 per cent of the passenger cars were able to meet the respective stopping distances of 40, 30 and 25 ft.

Almost all passenger cars and two-axle trucks, 76 to 85 per cent of the three-axle trucks and truck-tractor, semi-trailer combinations,

69 per cent of the trucktractors with semi-trailers and full trailers, and 51 per cent of trucks with full trailers were capable of meeting their respective Uniform Vehicle code requirements for deceleration.

The average levels of performance in stops from 20 mph for commercial vehicles was about 25 ft for two-axle trucks with a GVW of 10,000 lb. Distances ranged from 35 to 45 ft for other two-axle trucks, from 40 to 50 ft for three-axle trucks, and from 45 to 55 ft for other combinations.

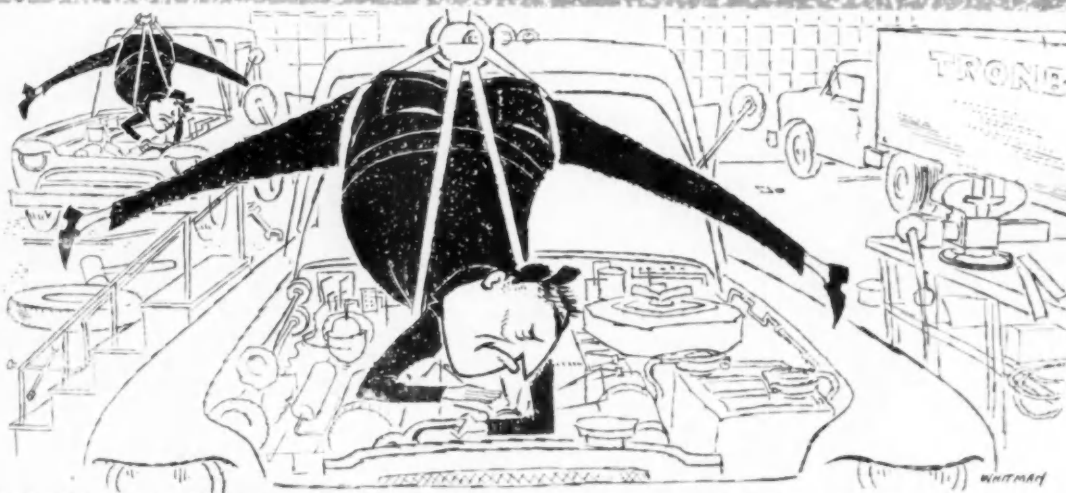
Many vehicles were found to have inadequate brakes for the loads they were carrying. F. W. Petring of the BPR, who presented the report at the SAE, felt that this condition may have resulted from inadequate maintenance, too heavy axle loads for the vehicle, and possibly poor selection of brake components. He found, however, that vehicles with axle loads as high as 22,000 lb could be adequately braked when the above factors were considered.

#### **Bus Suspensions**

**F**OLLOWING a general review of American and European bus suspension systems, A. B. Hirtreiter forecast smoother riding buses in the early future. He saw future use of air suspension and the possibility of power suspension systems when gas turbines or free piston engines are used to power the vehicles. With these power units, he said, more power will be available for accessories, such as a full power suspension which will maintain a bus parallel to and at a fixed distance from the main road surface.

"Economics will play a very large part in the selection of the eventual type of suspension," he explained. And, regardless of the type used, "we can rest assured that it will be a good suspension and will result in a low maintenance cost unit for operators and a comfortable ride."

# Accessibility, Action Program Can Ease Mechanic Shortage



**T**HERE ARE two basic ways of trying to solve the present shortage of mechanics:

1. Increase the number of young men being trained as future mechanics;
2. Improve the efficiency of the mechanics already in service.

Both approaches to the problem came in for discussion at the Society of Automotive Engineers' National Transportation Meeting in October.

In a formal presentation on mechanic education and training, Professor Amos E. Neyhart, Director of the Institute of Public

**By Jack Colgan**

Special Features Editor

Safety at Pennsylvania State University offered an eight-point action program aimed at solving the mechanic shortage.

In a "Design for Maintenance" session three fleetmen urged designers to keep the maintenance man in mind, pointed out that complexity of modern vehicles has boosted the time needed for mechanics to service them. Tractor, trailer, bus and truck designs came

under fire in these sessions. The critics: A. Walter Neumann, Director of Purchases and Maintenance for the Willet Co., Chicago; Gustav E. Heiber, of the Boston, Worcester and New York Street Railway Co.; and Andrew Ambli of Briggs Transportation Co.

## **Simplify or Train**

Both sessions offered relatively long-term solutions to phases of the mechanic shortage problem. And while fleetmen may offer strong support to a program aimed at recruiting new mechanics, you will see from the comments made

**"Design vehicles with maintenance man in mind,"  
fleetmen tell engineers at SAE, while Penn State's  
Ame Neyhart calls for "Dynamic Leader" to head  
a nation-wide Action Program aimed at long term  
solution to the steadily growing mechanic shortage**

at the meeting that their demands for greater accessibility will grow louder as they become increasingly aware of the added time needed by mechanics to service inaccessible components.

#### Action Program

After outlining the seriousness of the mechanic shortage (See: "Help Wanted—More and Better Mechanics," Commercial Car Journal, October, page 80) Professor Neyhart had these suggestions for improving the situation:

1. Establish a national committee consisting of representatives from automobile manufacturers, parts and equipment manufacturers, American Vocational Assn., Society of Automotive Engineers, National Automobile Dealers Assn., truck, bus and taxicab associations and a union representative. Purpose of this committee would be to establish definite standards for training courses and for certifying different grades of workers in this field.

A "dynamic leader," he said, must guide the activities of this committee.

2. Raise the job of mechanic to that of a profession. Begin by changing the name from "grease monkey" to automotive technician.

3. Improve general housekeeping as well as shop "living conditions." You can't expect Grade A men to be willing to work under Grade E conditions.

4. Establish incentive programs, promotional opportunities, fringe benefits and other goodwill build-

ers. If this is not done your workers will seek more attractive employment elsewhere.

5. Take a look at your supervisory force. Can the supervisors do the jobs their men are expected to do? Are they capable of handling people? Perhaps they could benefit from one of the training courses held on a college campus.

6. Contact your local school authorities and point out the desirability of a joint committee for the improvement of the automotive training program in your local schools. School authorities are not likely to act on this alone. (Watch for a description of how some fleetmen have developed such cooperative action in a future article in this series.)

7. At national level, conduct an educational program for the public in general, and parents in particular, informing them of the new concept of the automotive technician, and the new social status of the job. We must never forget that we are forever competing for young talent. Call their attention to the fact that even the medical professional often has quite messy, unattractive jobs to perform, for those who are squeamish about the dirt and grease.

8. Establish on-the-job training for both those already employed and for new workers. This will vary with particular organization and methods of each shop. Also, encourage widespread use by employees of available supplementary training.

#### Design Problems

Since any eventual solution to the mechanic shortage situation will require cooperation between vehicle users and manufacturers, both groups can benefit from the comments on design made at the meeting. For manufacturers, these comments may seem like a familiar theme. But it's a theme they can expect to hear repeated in the future. For fleetmen, the criticisms of present design can be a guide in their selection of future equipment, since they point-up the fact that time required for servicing is a factor to be considered in choosing between two comparable vehicles.

One of the more outspoken critics of current truck design was A. Walter Neumann, of the Willett Co., Chicago. While he acknowledged that cab-over and cab-forward type vehicles are necessary for efficient operation in cramped and crowded city streets, he urged that designers and engineers search for ways to make these vehicles more accessible for servicing. Contrasting time required to service a COE tractor with the time needed to do the same work on a conventional unit, he offered these figures:

Job	Time (hrs.)	
	Std.	COE
1. Changing fan belt on a unit equipped with an air compressor	¾	1¼
2. Adjusting tappets	1	1¼
3. Remove and replace carburetor	¾	1¼
4. Remove and replace spark plugs	¾	1¼
5. Remove and replace distributor	1	2
6. Change one cylinder head (right)	4.6	6.1
7. Changing engine	16	31.6

Pointing out that some designers seem to think that motor truck operators want their trucks to look as stylish and streamlined as passenger cars, Neumann said that while this may influence some truck buyers, it is inconceivable that operators of heavy-duty trucks in particular are much influenced by streamlining, especially at the sacrifice of utility. He was critical of bulging cabs, over-generous fenders, projecting grilles, and setback bumpers, pointed out that these features were not only unnecessary, but contributed to poor

(TURN TO PAGE 132, PLEASE)

# Reefer Research Pays Dividends

Two-year tests produce improved insulation, new floor design that save

**V** AFTER TWO years' intensive research, Emery Transportation Co. has developed special insulating materials that drastically reduced heat seepage into its refrigerated trailers. These new materials—plywood and plastic—also prevent moisture from corroding the trailer at several key points. As a result, reefer operating life has been increased up to 50 per cent.

The reefer units which Emery has modified are used mainly to haul fresh meat. With this type of cargo, the moisture problem is particularly serious, explains Roger Thorsland, Emery's maintenance superintendent. Salt from the meat drops on the floor of the trailer, then forms a highly corrosive solution when it mixes with the water that is used to hose down the inside of the trailer at the end of a run.

In the case of Emery's older trailers, this solution would leak through the aluminum floor deck, permeate the insulation, and begin eating away the galvanized steel subfloor. Meanwhile, the underside of the subfloor was being attacked by road acids. Sooner or later, the subfloor would develop cracks. Outside heat would pass through these openings. The insulation, which had become matted down with moisture, was unable to prevent the heat from getting into the refrigerated area.

## Three-Step Modernization

This is what Emery has done to solve the problem:

1. Replaced the galvanized steel subfloor with one made of exterior fir plywood. The plywood provides a better heat barrier, also provides superior protection against road acids.

2. Instead of using conventional fiber glass insulation, the firm has switched to "Styrofoam," which is reportedly much better able to resist moisture. The "Styrofoam" comes in sections measuring 12 ft long, 1 ft wide, and 2 in. thick. The material is cut into four-foot lengths then laid between each plywood subfloor panel (which measures 4x8 ft) and the floor deck. A mastic is used to bind it into a solid sheet.

3. The design of the aluminum floor deck has been modified so that moisture from inside the trailer has much less chance to seep into the insulation.

## Meat Rail Problem

The metal rails used to carry fresh meat in transit are another source of heat loss in Emery's older trailers, Thorsland explains. Dressed carcasses are hung from

New floor deck panel joint (bottom sketch) withstands corrosion, protects screw heads from attack by brine



Flashing at nose is now welded to deck. It was bolted before, but brine corroded bolts, seeped into insulation



# at Emery

## cargoes, boost trailer life 50 per cent

these rails, which are attached to the ceiling of the reefer box. Because of the way the rails are installed, there is a continuous metal path from the inside of the refrigerated compartment to the outer skin of the trailer. Outside heat travels along this path and gets inside.

Emery eliminated this problem, in effect, by blocking the path, using wood instead of metal for the ceiling beams used to support the rails.

Before these changes were made, the company also had trouble keeping the interior of its reefer units clean. The plywood panels used for the interior walls and ceiling of the standard trailer can't be steam cleaned easily, Emery's maintenance superintendent explains. These panels don't stand up when bumped by loaded skids, either, he adds.

The company is now covering walls and ceiling surfaces of its refrigerated trailers with plastic-impregnated plywood. Pressure-sensitive tape covers the joints formed by the 4x8 ft. panels. The new material is 5/16 in. thick, as compared with the 1/4 (4/16) in. thick plywood used on standard trailers.

### Plastic-Plywood

The extra thickness, plus the plastic impregnation, has reduced punctures and rips substantially, and walls can be steam cleaned repeatedly without deteriorating, Thorsland reports. Cost of this special plywood is approximately three times the price of the standard article, "but it's more than worth the extra money," he adds.

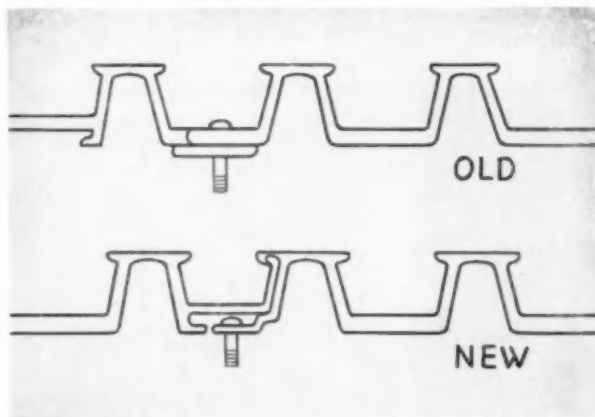
Since launching its research efforts about two years ago, Emery has installed one or more of these

modifications on some 200 reefer units, all of which were new at the time the changes were made. A few of the units have been in service for the whole two year period, but the majority have been in operation—and under observation—for a year. Reports Milton Ratner, Emery's president: "We are quite satisfied so far. Both moisture seepage and heat losses have been virtually eliminated."

The refurbished trailers are bringing the company two main savings. For one thing, the amount of meat arriving at the consignee's dock "off-condition" has been greatly reduced. This term refers to meat that hasn't spoiled, but has started to deteriorate. Approximately 10 percent of the company's total tonnage involves fresh meat shipments. Major movements are between midwest points, such as Chicago, and New York and Philadelphia. The trip takes up to 50 hours. Formerly, reports Thorsland, the off-condition problem was "really serious."

The second saving—longer trailer life—stems mainly from  
(TURN TO PAGE 122, PLEASE)

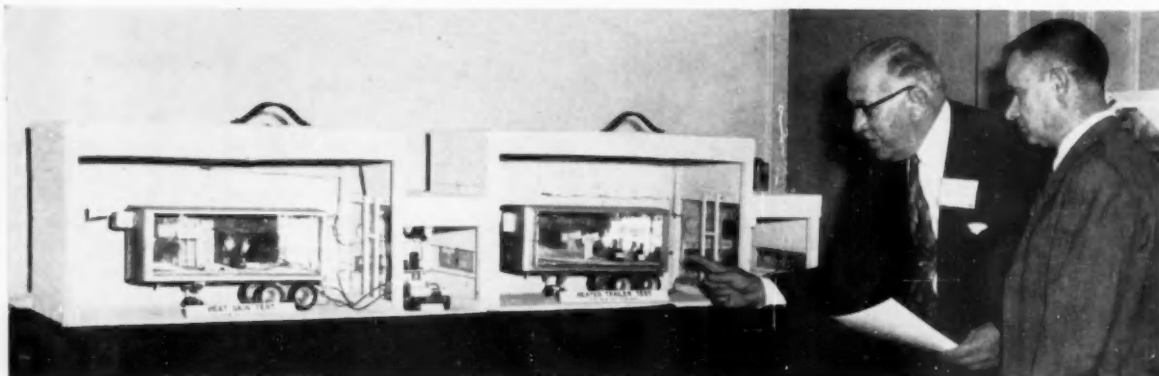
Here's how brine used to eat through floor deck edges. Emery solved the problem by welding deck to metal sill



Moisture-resistant "Styrofoam" is now used as sub-floor insulation. Four-foot sections are laid between sub-floor and deck, are bound with mastic paste



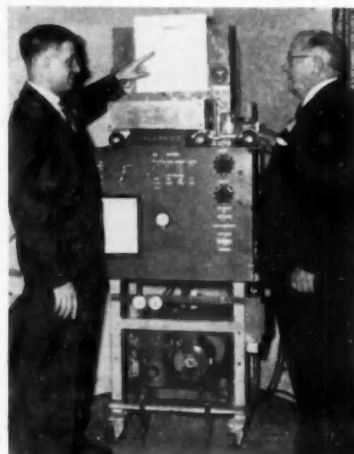




Above. Harold Johnson, Walter Redit of Agriculture Dept. inspect models

Right. C. W. Phillips of Bureau of Standards and Johnson with tester

## Meet the "TRAILERATOR" New Guide to Reefer Efficiency

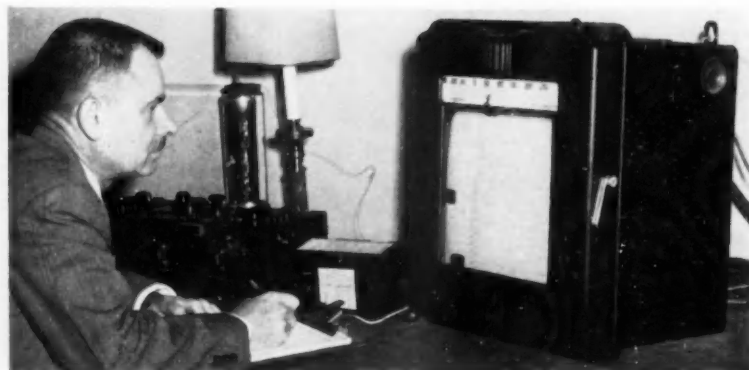


**V** MANY ATTENDING the American Trucking Assns. convention in New York got their first look at the "Trailerator." The device is actually a whole battery of instruments developed by the National Bureau of Standards in conjunction with Dept. of Agricul-

ture. It is not commercially available as yet but has successfully passed the laboratory stage and was used in the trailer tests at Edgewater Park, Miss., late last spring (June, page 70).

The equipment is capable of giving a positive rating on heat

loss of trailers under laboratory or static conditions. It is hoped that additional tests will extend its usefulness to actual road conditions. This will require adjustments for wind, bellowing effect and other conditions not present in the laboratory. Most importantly, it can test old trailers as well as new ones.



### Order Trailers by Btu

Milton Ratnor was in the room when CCJ visited the exhibit. He is chairman of ATA's National Committee on the Transportation of Perishables by Motor Truck. He is also president of Emery Transportation Co. (See page 78, this issue). When asked where

(TURN TO PAGE 140, PLEASE)

Left. Walter Redit takes a reading on new temperature recording device



**TYPICAL GENERAL ELECTRIC AUTHORIZED SERVICE STATION** is Lane's 2-Way Radio Service in New London, Conn. Owner Al Lane has been in electronics service for over 30 years—now provides maintenance for more than 200 customers' mobile units.



**MOBILE TWO-WAY RADIO SERVICE SHOP**, completely equipped, that Lane uses for fast, efficient servicing on two-way systems. Lane's preventive maintenance program includes monthly checks on all mobile and base station units—of all makes.

## KEEP TWO-WAY RADIO SYSTEMS AT TOP EFFICIENCY WITH GENERAL ELECTRIC AUTHORIZED SERVICE

**General Electric Authorized Service Stations are independent local businessmen, factory-trained to maintain your two-way radio system's full-time operating efficiency at the lowest possible cost.**

Whether you now operate a two-way radio system, or are contemplating the installation of one, it will pay you to investigate the prompt, thorough and economical servicing programs offered by more than 500 General Electric Authorized Service Stations throughout the nation.

Like any investment, a communications system requires planned management to yield a satisfactory return. Such return on your two-way radio system requires planned *maintenance*. General Electric's Authorized Service Stations use experts, factory-trained to provide service that protects your investment by preventing loss of communication.

*Licensed Experts.* To be franchised as a General Electric Authorized Service Station, an independent operator

must be fully licensed by the Federal Communications Commission to perform checks and maintenance on radio communication equipment. He must have the highest reputation in the community for fair dealing and good workmanship, and must carry adequate stocks of factory parts to assure quick repairs in emergencies.



Once franchised, General Electric Authorized Service Stations are enrolled in a continuing program of service training. In addition to factory-training sessions, all stations are regularly supplied with latest maintenance instruction manuals, bulletins, and hints on servicing all makes of two-way radio equipment. Also, General Electric employs highly skilled Communications Engineers in major cities, experts who are immediately available to any independent Authorized Service Station, or customer, for consultation on any communication problem.



**FOR SALES AND SERVICE** see "Radio Communication Equipment" in your Yellow Pages. Or, write: General Electric Co., Communication Equipment, Section X70186, Electronics Park, Syracuse, N. Y. In Canada, write: C.G.E. Electronics, 181 Lansdowne Avenue, Toronto.

*Progress Is Our Most Important Product*  
**GENERAL ELECTRIC**



New Model No. FC-150 forward control Willys is rated at 5000 lb GVW, has 81-in. wheelbase. It measures 147½ in. long and 71¾ in. wide

## New Jeep Has FORWARD CONTROL

**With curb weight of 2925 lb, new Willys is rated at 5000 lb GVW, has over 6-ft body length, 81-in. wheelbase and an 147½-in. overall length**

▼ A NEW "Forward Control" 4-wheel drive Jeep has been introduced by Willys Motors, Inc., as an addition to its expanding line of utility vehicles.

Aimed at providing maximum cargo space in relation to wheelbase, the new FC-150 has the cab situated well forward of the engine to provide more than six feet of cargo bed length despite the 81 in. wheelbase. With tailgate extended, cargo length is 92 in. Overall length is 147½ in., turning

radius 18 ft., and it is rated at 5000 lb GVW, with a curb weight of 2925 lb.

The FC-150 is powered by the 4-cyl Willys F-head "Hurricane" engine. The engine has 134.2-cu in. displacement, develops a maximum 75 hp at 4000 rpm and 115 ft lb torque at 2000 rpm. Compression ratio is 6.9:1 standard, 7.4:1 optional. A three-speed synchromesh transmission is standard, with a 4-speed unit available as an option.

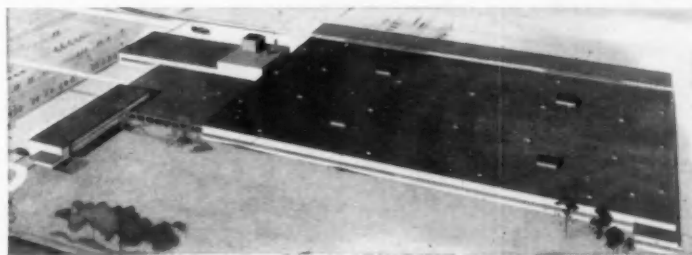
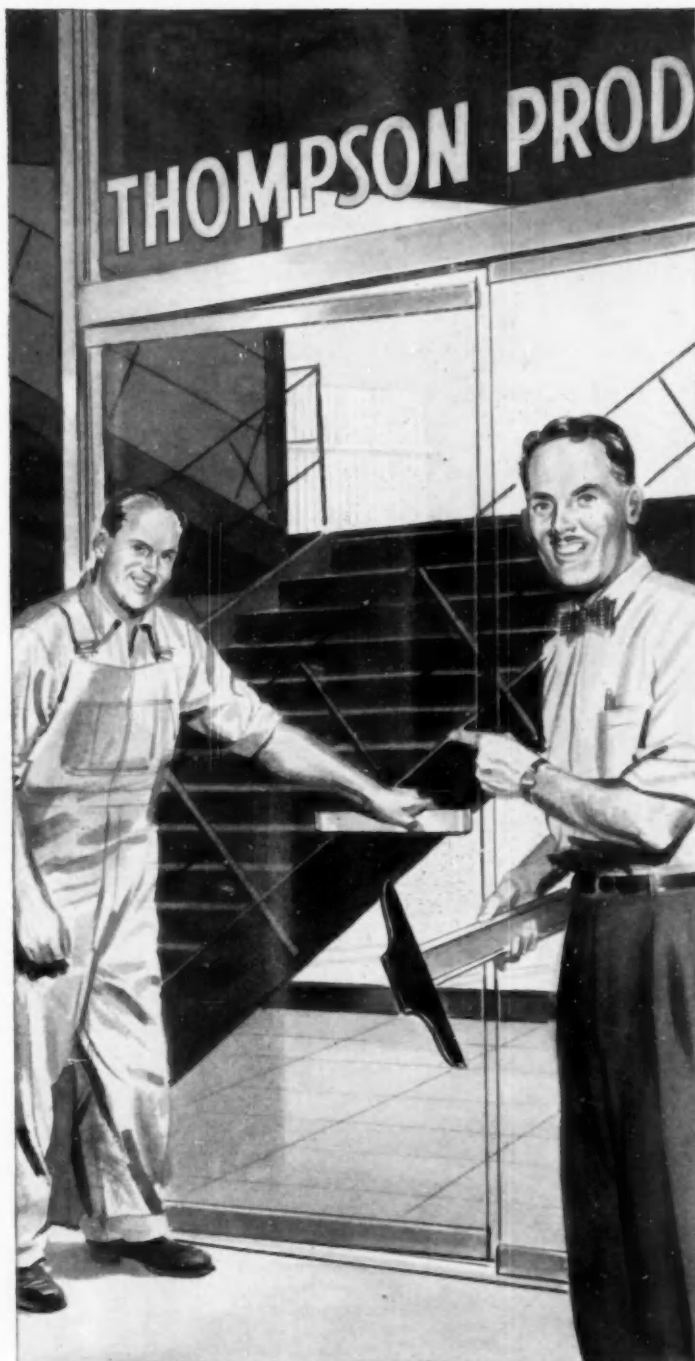
(TURN TO PAGE 120, PLEASE)



Cab features include suspended brake and clutch pedals, brake fluid access cover on dash and plenty of visibility



For engine servicing, two hinged panels can be opened. One is at side of cab, the other is behind rider's seat



*New Thompson plant now in operation.*

# It's open Now!

*Thompson's new, modern automotive  
parts manufacturing facility*

**A**LREADY production is humming in Thompson's brand-new parts-manufacturing plant just opened at 34201 Van Dyke, Warren (Detroit), Michigan. This completely modern facility is employing the latest methods and equipment available to provide low-cost, most efficient manufacture of chassis parts.

Chassis design improvement has become an increasingly important factor in the automotive industry's future planning. This, plus the tremendous acceptance of Thompson steering linkage and other chassis parts has made Thompson's latest expansion necessary.

Finer steering linkage and suspension parts, new and advanced manufacturing techniques, better customer service—these are but some of the advantages that Thompson offers you.

Have *your* engineers call on Thompson to help develop your steering linkage and suspension. Write, wire or phone Thompson Products, 34201 Van Dyke, Warren, Michigan.

**You can count on  
Thompson  
Products**

Michigan Division: Detroit • Portland

**"I wish I'd done it 2 years ago . . ."**



**MOTOROLA 2-WAY RADIO STARTED BOOSTING PROFITS THE DAY IT WAS INSTALLED"**

"2 years ago I felt handcuffed, watching my competitors building up their business while we were left at the post . . . listening to customers complain and eventually drift away. I had heard of 2-way radio, but I was "on the fence" about it. Others were using it and actually taking my customers away from me with better service.

"So I decided to take the plunge—and that turned out to be the happiest business day of my life. Motorola 2-way radio cuts costs a dozen ways and gets more work from every truck. Single handed, it

has taken our hit-and-miss operation and made it into a smooth-functioning, profit-making unit.

"With better service we're keeping our present customers and winning many of the old ones back. News gets around and we're putting new customers on our books every day. I was pretty late in discovering 2-way radio, but now it runs a close second to trucks as the most important tool in our organization. Before I invested, I learned that Motorola furnishes more 2-way radio than all others combined. The reasons become more obvious after using it for 2 years."

*Write, phone or wire TODAY*

**MOTOROLA**  
2-WAY TRUCK RADIO

MOTOROLA COMMUNICATIONS & ELECTRONICS, INC.  
A SUBSIDIARY OF MOTOROLA, INC.  
4501 AUGUSTA BOULEVARD • CHICAGO 51 ILLINOIS



*Motorola consistently supplies more mobile and portable radio than all others combined.*

*Proof of acceptance, experience and quality.*

*The only COMPLETE radio communications service—specialized engineering...product...customer service...parts...installation...maintenance...finance...lease.*

*"The best costs you less—specify Motorola."*



1956

For regular departmental features, see index on page 2 of each issue. Articles marked with a \* feature bus operation

Listing the year's features under 15 subjects, making it easy to locate articles for re-reading or putting to work

Month, Page

## CONVENTIONS &amp; ASSOCIATIONS

Society of Automotive Engineers, Annual Meeting.....	Feb. 80
Truck-Trailer Manufacturers Assn., Annual Meeting.....	Feb. 82
Private Truck Council of America, Annual Meeting.....	Mar. 78
National Tank Truck Carriers, Annual Meeting.....	May 102
ATA Regular Common Carrier Conference Meeting.....	June 70
ATA Equipment and Maintenance Council, Spring Meeting.....	June 82, 83; Aug. 82
ATA Council of Safety Supervisors, Spring Meeting.....	June 83
President's Committee for Traffic Safety Conference.....	June 90
National Highway Users Conference, Highway Transportation Congress.....	June 104
Society of Automotive Engineers, Summer Meeting.....	June 144; July 90; Aug. 94
National Committee for Motor Fleet Supervisor Training.....	July 79
Society of Automotive Engineers, San Antonio Chapter.....	July 92
American Transit Assn., Annual Meeting.....	Oct. 70
National Automobile Show.....	Oct. 82; Dec. 72
Fleetman's Association Directory.....	Nov. 109
Society of Automotive Engineers, Transportation Meeting.....	Dec. 74, 76

## COSTS &amp; RECORDS

Automation for Shop Records (G. T. Stufflebeam).....	Jan. 82
More Miles from Your Maintenance Dollar.....	Feb. 80
Inland Motor Freight Slashes Costs.....	Mar. 92
U. S. Government Fleet Operating Facts.....	Apr. 124
*Condition Vs. Mileage Maintenance (F. C. Cordone).....	May 68
Common Carrier Costs—a Comparative Study.....	May 72
Records, Key to Smooth P.M.—Super Service.....	June 76
Nylon Tarps Meet Tough Fleet Requirements.....	June 94
What Does a Toll Ride Cost?.....	June 96
How You Can Reduce Personal Injuries—McLean.....	Sept. 88

## FLEET OPERATIONS

Weigh 'Em on the Go.....	Jan. 72
Electronics Guide Cargo Loading (E. S. Safford).....	Feb. 74
Costwise "Fishy-Back" Ready for Launching—McLean.....	Mar. 76
Dock Weighing Ups Payload, Saves Time.....	May 94
Equipment Control Improves Liberty's Service.....	June 98
"Our Slip Is Showing"—Super Service Motor Freight.....	Aug. 76
Consolidated Goes Big in Short Haul.....	Sept. 232
TMT Trailerships Span Caribbean.....	Oct. 72
Army Motor Transport Reserve Unit Directory.....	Nov. 318
Consolidated Uses Blind for In-Plant Feeding.....	Dec. 142
Arctic Cold Weather Operation (J. Hulse).....	Dec. 148

## FUELS &amp; LUBRICATION

Multi-Purpose Greases Can Slick-Up Your Service.....	Jan. 74
More Miles from Your Maintenance Dollar.....	Feb. 80
Truck Lubrication Specifications.....	Apr. 70
*Bus Lubrication Specifications.....	Apr. 100
Engine Lubrication Specifications.....	Apr. 104
Fleet Passenger Car Lubrication Specifications.....	Apr. 112
An Engineer Looks at Multi-Grade Oils (E. E. Kornya).....	Aug. 82
*Propane Buses Prove Out for Chicago Transit.....	Sept. 70

## HIGHWAY FACTS

Up Front with CCJ.....	See Index, Each Issue
Television Keeps Traffic Moving.....	Feb. 148

Month, Page

Private Operators Look at Roads, Taxes, Equipment.....	Mar. 78
Highway Public Relations Films.....	Apr. 258
What Does a Toll Ride Cost?.....	June 96
Federal Highway Program Means Better Local Roads.....	June 104
Highways Ahead, You'll Pay for Them.....	Aug. 70
'56 Legislation Sets Pattern for '57.....	Sept. 73

## INDUSTRY STATISTICS

New Truck Registrations.....	See Index, Each Issue
Rubber-Tired Pipe Lines.....	June 69
High-Voltage Fleets.....	Feb. 71
The Long Range Future (M. J. Barloon).....	Feb. 82
The Milk Route.....	Mar. 69
Truck, Bus, Trailer and Tonnage Statistics.....	Apr. 117
Municipal Wheels.....	May 79
Refrigerated Trucks, a Growing Fleet.....	June 69
Regional Operating Ratios Measure 1955 Performance.....	June 110
1955 Truck Registrations Up Five Per Cent.....	June 112

## LEGISLATION &amp; REGULATION

Up Front with CCJ.....	See Index, Each Issue
Agreed Charges, Menace to Truck Operators (J. Colgan).....	Jan. 64
Lighting Standards for Trucks and Trailers (ATA).....	Jan. 92
Private Operators Look at Roads, Taxes, Equipment.....	Mar. 78
State Size and Weight Limits.....	Apr. 126
Safety Equipment Required and Permitted.....	Apr. 129
State Mud Guard Requirements.....	Apr. 137
State Vehicle Inspection Laws.....	Apr. 140
ICC Brake Regulations.....	June 17
How to Meet the New ICC Brake Requirements.....	July 73
B-W Equipment Meets the Brake Regulations.....	Aug. 72
'56 Legislation Sets Pattern for '57.....	Sept. 73
"Three Shall Not," Latest Railroad Switch in Transport Policy.....	Sept. 76
Trip Lease Bill Amends IC Act.....	Sept. 108
Federal Highway Use Tax Schedule.....	Dec. 116

## MAINTENANCE

## Brakes

ICC Brake Regulations.....	June 17
*DSR Brake Work Makes Brakes Really Work.....	June 72
Emergency Brakes, Where Do We Stand.....	June 83
How to Meet the New ICC Brake Requirements.....	July 73
SAE Summer Meeting Reviews Truck and Bus Problems.....	July 90
B-W Equipment Meets the Brake Regulations.....	Aug. 72
Servicing the Warner Electric Brake.....	Sept. 86

## Electrical &amp; Ignition

Lighting Standards for Truck and Trailers (ATA).....	Jan. 92
Grandview Dairy Calls on the Experts.....	Feb. 76
Truck Ignition Specifications.....	Apr. 70
*Bus Ignition Specifications.....	Apr. 100
Engine Ignition Specifications.....	Apr. 104
Fleet Passenger Car Ignition Specifications.....	Apr. 112
Spark Plug Heat Range Chart.....	Apr. 116
Repair of the LN Alternator.....	May 82
Miracle Battery? No, Not Yet (L. Dubinski).....	July 92

(Turn to Next Page, Please)

# Index of 1956 Features

Continued from Page 85

Month, Page

## MAINTENANCE—continued

### Engines

*Gaging the GM Diesel (H. A. Grenert, C. N. & C.)	Mar. 64
Bonded Pistons for Heavy Duty Service (H. C. Reynolds)	Mar. 82
Truck Engine Maintenance Specifications	Apr. 70
*Bus Engine Maintenance Specifications	Apr. 100
Engine Maintenance Specifications	Apr. 104
Fleet Passenger Car Engine Maintenance Specifications	Apr. 112
Know Your Bearing Failures (W. Thill)	July 80

### Programs & Procedures

At Your Service	See Index, Each Issue
Micro-Siping of Tires Improves Wear and Safety	Jan. 78
*B-Point Program Sets New PM Goals for CTA	Feb. 76
Grandview Dairy Calls on the Experts	Feb. 80
More Miles from Your Maintenance Dollar	Feb. 80
*Gaging the GM Diesel (H. A. Grenert, C. N. & C.)	Mar. 64
System Maintenance Applied to Two-Way Radio (J. Jatis)	Mar. 74
Inland Motor Freight Slashes Costs	Mar. 92
*Condition Vs Mileage Maintenance (F. C. Cardone)	Mar. 98
Repair of the LN Alternator	May 82
Records, Key to Smooth PM—Super Service	June 76
The "Eucs" That Never Wear Out—Jones & Laughlin	July 70
*Inspection, Vital Tool for Shooting PAR	July 70
SAE Summer Meeting Reviews Truck and Bus Problems	July 90
Railway Express, Delivery Deluxe	Aug. 66
Transmission Troubles Caused by the Driver (L. C. Butler)	Aug. 78
Here's What You Should Know About Radio Noise	Sept. 74
Tips on Good Torque Converter PM	Sept. 228
*ATA Workshop Session Stresses Daily Bus Servicing	Oct. 70
Reefer Research Pays Dividends at Emery	Dec. 78

### Tools & Equipment

Shop Hints	See Index, Each Issue
Spector's Portable Rig Speeds Reefer Service	Jan. 76
Shop Hints from Super Service	Mar. 70
Jack Selection and Maintenance (J. J. Dixon)	Mar. 100
Shop-Designed Tools Expedite Maintenance—Willett	June 78
Super Service Tools for Super Wheel Service	June 80
Shop Hints from Lyons Transportation	Aug. 80
Home-Made Tools Ease Tire Work	Aug. 86
Switch to New Tractors Sparks Shop Tool Ideas	Sept. 82
New Shop Spawns Better Methods—Yellow Transit	Oct. 78
Red Star Cuts Costs with "Do It Yourself" Maintenance	Dec. 66

### Training

*Back to School at New York Omnibus	Jan. 70
Maintenance Training Film List	Apr. 164
Selected Maintenance Manuals	Apr. 184
Cat Skinner: Go to School	June 102
Help Wanted: More and Better Mechanics	Oct. 80
Fleet Course School Directory	Nov. 214
Fleet Engineer, He's Part of Management	Dec. 74
Accessibility, Action Can Ease Mechanic Shortage	Dec. 76

## NEW MODEL DESCRIPTIONS

### Engines

Hercules OHV Engines	Jan. 94
Studebaker's 245-cu in. Engine	Mar. 106
Hercules GO and DD Series Engines	May 96
F & H Diesels Ready for Truck Power	May 100
Cummins Turbocharged 335-hp NRT-6 Diesel Engine	July 94

### Trailers

Fruehauf-PIE Tank Truck	Jan. 96
Fruehauf's "Hasko-Struct" Insulated Reefer	Mar. 106
Highway Designs New Freightmaster	May 106
Andrews Trailer Co. Converts Trailers to HI-Cube	Sept. 110

### Trucks

Chevrolet's New Transmission Highlights '56 Models	Feb. 90
Dodge 1/2-Ton Town Wagon	Feb. 92
Chevrolet Goes to 32,000 lb GVW	Mar. 90
FWD Cab-Over for 1956	Mar. 94
GMC's Light and Medium Duty Models for 1956	Apr. 160
Diamond T Diesel Tilt Cab	Apr. 162
New Metro Route Truck Uses Magnesium	Apr. 208
PIE Designs for the Long Haul—XD-30	May 76
Dodge Announces Six-Wheelers	May 106
International V-8's Power V-Line Trucks	June 100
Divco Announces 10-ft Body	June 108
Dodge Introduces New COE's	June 108
GMC Describes New Heavy Duty Models	June 112
Federal Release: Crane Carrier Details	June 112
GMC Announces 1/2 Through 1-Ton 44's	July 208
FWD Builds 10,000-lb Road Tractor	July 210
Kenworth Drop-Frame Models Are Lighter	Aug. 92
National Auto Show	Oct. 82; Dec. 72
Autocar Has Two New Light Weight Models	Oct. 84
Divco "Squares Off" Retail Trucks	Nov. 24

GMC Describes '57 Light and Medium Duty Models	Nov. 40
Chevrolet Expands for '57, Has 80 Models	Nov. 42
Dodge Announces "K" Series in '57	Nov. 44
Studebaker Goes to 19,000 lb GVW in '57	Nov. 46
New Jeep Has Forward Control	Dec. 82
Diamond T Adds a Medium Duty	Dec. 88

## Vehicle Equipment

GMC Shows New Axle and Suspension Systems	Jan. 90
Clayton's Exhaust-Burning Muffler	Jan. 96
Tranter's Mark 1008 Reefer System	Feb. 92
Air Conditioning Moves into the Fleet Field	Mar. 80
Fuller's New RoadRanger	Mar. 96
Dana's Spicer-Thornthorn "Power-Lok" Differential	Mar. 102
K & B's Brake Safety Valve	Mar. 104
Talco's Ballistic Brake Actuator	Mar. 104
Olson Bodies for Dodge	May 104
Look to the Truck Engine for Reefer Power	June 66
B-W Equipment Meets the Brake Regulations	Aug. 72
Retarders Save the Brakes and the Engine	Aug. 94
Clark's 18,000 and 20,000-lb Trailer Axles	Aug. 96
Fawick (Girling) "2LS" Brake	Sept. 92
Clark Announces Air Suspension, Front Axle, Transmission	Sept. 104
Timken-Detroit Wide Range, 2-Speed Axle	Dec. 88

## PUBLIC RELATIONS

Truck and Bus Public Relations Films	Apr. 258
Eleven Steps to Community Traffic Safety	June 90
*Operation Zero Accidents at Nashville Transit	Aug. 74
PIE Builds Reputation As Good Citizen of the Highways	Sept. 80
Roadco Week in North Carolina	Sept. 114

## SAFETY & DRIVER TRAINING

Bulletin Board	See Index, Each Issue
Safety Equipment Required and Permitted	Apr. 129
State Vehicle Inspection Laws	Apr. 140
Safety Films for Truck and Bus Fleets	Apr. 224
Short-Term Incentives Pay Long in Safety (M. G. Noon)	May 66
Tank Carriers Meeting Puts Accent on Safety	May 102
ICC Brakes Regulations	June 17
Eleven Steps to Community Traffic Safety	June 90
How to Meet the New ICC Brake Requirements	July 73
Certification Program Sets Professional Standards	July 78
*Operation Zero Accidents at Nashville Transit	Aug. 74
Transmission Troubles Caused by the Driver (L. C. Butler)	Aug. 78
PIE Builds Reputation As Good Citizen of the Highways	Sept. 80
How You Can Reduce Personal Injuries—McLean	Sept. 88
Buffalo Safety Patrol Checks Driver Performance	Sept. 98
Willett Drivers Must Prove They Can Drive	Oct. 76
Fleet Coach School Directory	Nov. 214

## SHOP MODERNIZATION

So You're Planning a Tractor-Trailer Shop (Rawson)	Feb. 64
Good Housekeeping Saves Motorent's Shop Problem	June 92
The "Eucs" That Never Wear Out—Jones & Laughlin	July 70
Deluxe Express, Delivery Deluxe	Aug. 66
Yellow Transit Swaps 10 Shops for One	Sept. 66
Nation's Biggest Truck Shop Opens at Los Angeles	Oct. 66

## SPECIFICATIONS

Truck Selection Specifications	See Index, Feb., Apr., July, Oct.
Lighting Standards for Trucks and Trailers (ATA)	Jan. 92
Truck Service Specifications	Apr. 78
*Bus Service Specifications	Apr. 100
Engine Service Specifications	Apr. 104
Fleet Passenger Car Service Specifications	Apr. 112
Engine Power Ratings	Apr. 114
Spark Plug Heat Range Chart	Apr. 116
Transmission Ratios	Apr. 132
Third Axle Specifications	Apr. 134
*Bus Selection Specifications	Apr. 138

## TRUCK, TRAILER & EQUIPMENT DESIGN

Up Front with CCJ	See Index, Each Issue
Private Operators Look at Roads, Taxes, Equipment	Mar. 78
Air Conditioning Moves into the Fleet Field	Mar. 80
Bonded Pistons for Heavy Duty Service (H. C. Reynolds)	Mar. 82
Detroit Creamery Swings to "Live" Axles	Mar. 98
PIE Designs for the Long Haul—XD-30	May 76
Gas Turbines Bid for Automotive Power	May 90
GM Experiments with Free Piston Engine	May 202
Look to the Truck Engine for Reefer Power	June 66
Reefer Test Measures Coasting Efficiency	June 70
Nylon Tarps Meet Tougher Fleet Requirements	June 94
What's New in Aluminum-Brass Radiators?	June 146
SAE Summer Meeting Reviews Truck and Bus Problems	July 90
Miracle Battery? No, Not Yet (L. Dubinski)	July 92
Retarders Save the Brakes and the Engine	Aug. 84
*St. Louis Public Service Cools a Bus	Aug. 92
*St. Louis Converts Bus to Salt Spreader	Dec. 70
Reefer Research Pays Dividends at Emery	Dec. 78
Meet the "Trailerator," New Guide to Reefer Efficiency	Dec. 80

## VEHICLE SELECTION

Selecting the Vehicle to Fit the Job	June 75
Railway Express, Delivery Deluxe	Aug. 66
*Propane Buses Prove Out for Chicago Transit	Sept. 70

SURE, POWER STEERING  
MAKES THE JOB EASIER.  
BUT IT'S THE ADDED SAFETY  
THAT COUNTS MOST.

OUR POWER-STEERED  
RIGS STAY ON SCHEDULE  
BETTER, TOO.

EITHER WAY,  
POWER STEERING MAKES  
GOOD BUSINESS SENSE.

## THE CASE FOR POWER STEERING ON TRUCKS!

The trend to power steering on trucks is based on one very practical reason—operators of trucks equipped with power steering have invariably found that the added safety and greater operating efficiency of their vehicles have demonstrated that power steering is indeed a sound investment.

Truck drivers using power steering report less tension and fatigue in normal driving and appreciate the positive control that blocks road shock from chuck holes and prevents loss of control if the truck is forced out on a soft shoulder.

The dispatcher knows the importance of regularly maintained schedules. He is quite aware that with power steering drivers are more relaxed and are better drivers than tired drivers. Thus, power steering not only reduces the hazard of road accidents, but helps the driver to maintain established schedules through better vehicle control.

In short, power steering, by saving time and money, contributes materially to a more profitable operation.

Truck manufacturers are always eager to offer their customers features

that will make truck operation safer and more profitable and, at the same time, give their dealers every selling advantage.

That's why more and more truck manufacturers are offering performance-proven Bendix\* Power Steering as original factory equipment.

If you would like to know why power steering for trucks is perhaps even more logical than power steering for passenger cars, we have prepared an interesting folder on the subject.

Write for your copy today. We think you'll be convinced.

\*REG. U.S. PAT. OFF.

**Bendix** PRODUCTS DIVISION **South Bend** IND.





## Diamond T Adds a Medium Duty

**D**IAMOND T Motor Car Co. has added a new model to its medium-duty line. Model No. 431 is powered by Diamond T's XL-264 six cylinder valve-in-head engine. With 264 cu in. piston displacement and 234 lb ft maximum torque, the engine develops 140 bhp at 3800 rpm. Bore and stroke are 3 11/16 x 4 1/4.

GVW for the new model is 19,000 lb. GCW is 35,000 lb.

Features of the overhead valve engine include aluminum alloy pistons, stellite faced valves, and silichrome alloy exhaust valve seat inserts. Exhaust valve linkage permits free "roto" action. Lubrication is full pressure type, with a gear-type pump and intake through a floating screen. Equipment includes a two-barrel carburetor, cam operated fuel pump, oil-filter and oil-bath air cleaner.

A major feature of the new model is its accessibility.

Fenders can be easily removed in about five minutes, leaving the engine compartment wide open for easy servicing.

Electrical equipment includes a 120 amp hr battery, standard generator with 40 amp output, color-coded wiring including 10 gage wire in the more heavily loaded circuits.

Model No. 431 is equipped with a Warner T98 synchromesh transmission. Helical gears are combined with synchronizing clutches. Double clutching is never required under any conditions, according to Diamond T. Gears and shafts are of heat-treated alloy steel, carried on anti-friction ball and roller bearings.

### Wide Axle Selection

Standard rear axle on this model is the Timken E-100, a heavy-duty full-floating single speed hypoid bevel with forged steel housing. Pinion, ring-gear and differential gears are all of alloy steel, case hardened and heat treated. Differential is of the four-pinion type—axle shafts are one-piece, with upset flanges. Options include a two-speed rear axle of comparable size and capacity. Over-size rear axles of both single-speed and two-speed types are also available for heavy loading or severe service. Two-speed axles have electric shift, with pre-selection of speed range and push button control.

Power brakes are equipped with a Bendix Hydrovac booster. They have twin operating cylinders at each wheel and molded linings. Drums are cast of alloy iron.

Frame design features full-depth siderails reaching from the rear of the front springs to the front of the rear springs. There are six crossmembers. Channel section between spring hangers is 8 1/16 in. x 3 in. x 1/4 in.

## TDA Has "Wide Range" Axle

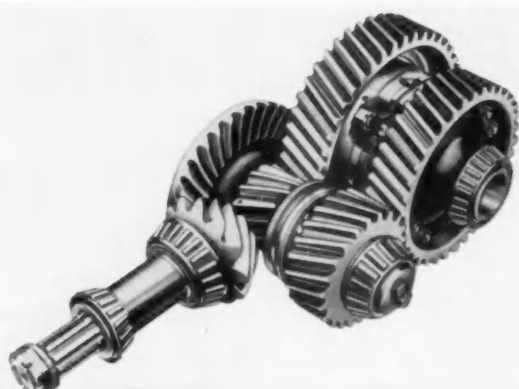
**A** NEW "Wide Range" 2-speed driving axle has been announced by Timken-Detroit Axle Division. Available in both 2:1 and 2 1/2:1 ratio, the new axle is said to offer all the advantages previously available only through the use of complex, multi-speed transmissions or auxiliary gear boxes without any of their penalties.

A simple switch of gear-arrangements made the new axle possible. Relative positions of the high-range and low-range helical gear sets were reversed. This put the enlarged helical pinion of the high-range gear set where it does not interfere with the hypoid pinion of the first-reduction gear set.

### No Split, No 2-Stick Shift

Moreover, such performance is achieved without split shifting, without 2-stick shifting, and with a simple shift pattern. According to T-D, this new concept permits the truck or tractor to be operated almost continually in the upper ranges of the transmission where engine efficiency and fuel economy are highest. In slow moving traffic the axle is held in low. On the highway, it is shifted into high for top road speed operation.

Power shifting is effected by means of a torque-controlled mechanism and activated by a pre-select switch. It can be actuated by air, vacuum, or electric means.

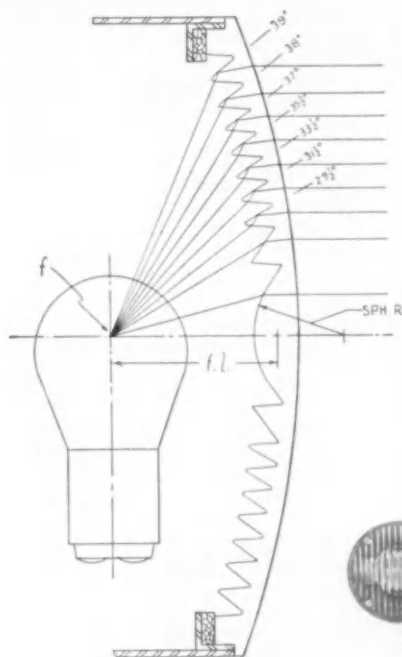


Wide range rear axles are made in two distinct types. The heavy duty Q and R series have top mounted carriers for short wheelbase chassis where minimum propeller shaft angularity is essential. Conventional front mounted carrier axles are supplied in the F, H, and L series.

Improved design of shift collar and cross shaft is said to be responsible for trouble-free operation and improved durability. The shift collar has three sets of internal teeth, the outer teeth being used for driving, the center teeth for locking. This arrangement safeguards shift procedure by reducing the risk of slipping out of gear, reducing gear wear at the same time.



## REFLECTION-REFRACTION-YOU



In the world's most modern and fully equipped photometric laboratory, Signal-Stat engineers put their imaginative ability to work and design Signal-Stat lenses. Ingeniously, projected light rays are *reflected in and refracted through the lens* for the most powerful and effective distribution of beamed light patterns. **YOU** help design our lenses. It is your safety and individual lighting needs that motivate our efforts.

**YOUR** breakage problem prompts every Signal-Stat lens to be molded extra thick of acrylics. Observe its thickness and you'll see why our lenses can take punishment beyond the cracking or breaking point of all others.

Signal-Stat lenses help fill your need for lamps capable of emitting powerful signals in both dark of night and glare of sunlight—to the sides as well as straight ahead. They're lenses that won't warp or fade.

Whether it be an individual part such as Signal-Stat's lens or brass socket . . . whether it be our signal lamps, combination turn signal, stop tail lamps or the exclusive **SIGFLARE®** System (the most versatile signaling system available), **YOU** can be certain it has the best of everything . . . engineering skill—materials—workmanship. And, you can be certain **YOU** had a hand in its development.

Signal-Stat costs no more and your truck manufacturer, dealer and automotive jobber can supply it. Insist on Signal-Stat.



# Signal-Stat

**DIRECTIONAL SIGNALS • SWITCHES • FLASHERS**

**Signal-Stat Corporation • 523-539 Kent Avenue, Brooklyn 11, New York**

\* **SIGFLARE**, at less cost, provides 4 Class A-Type 1 Directional Signals, 2 Stop Lights, 2 Tail Lights and 4 powerful lamps for disability warning—all with just 4 lamps and the patented Sigflare Switch.



# December News Roundup

## Easier Fleet Loans

Easier credit for fleets is shaping-up from two sources. The Small Business Administration in Washington, D. C., has said (1) fleet operators with under \$2 million annual gross will be eligible for credit from the agency if it is not available from private sources, and (2) fleets with \$2 to \$5 million annual gross will be considered for SBA loans with such applications subject to rigid economic analysis.

## Second Money Source

Second money source is a new ATA Committee presently organizing a mutual loaning company plus a loan insurance company. The loan company will get its initial funds from sale of stock to trucking industry members.

## 41 Per Cent Sales Tax

Fuel tax on gasoline is the equivalent of a 41 per cent sales tax says the American Petroleum Industries

Committee. Statement was made at the annual meeting of the American Petroleum Institute in Chicago middle of last month. Present average tax is 8.8¢ on top of an average price for regular gasoline of 21.6¢ per gal. APIC goes on to point out that the 21.6¢ price is less than the 1919 average price per gallon of 25.4¢.

## Clark's Semi-Automatic

That new Clark "TransVerter" transmission *semi-automatic*, is not automatic as described in the September issue, page 106. We were carried away by the factory claim that "most work can be performed in the same gear." This is true. It is also true that the unit includes a four or even a five-speed manual shift.

## Illinois Mud Flaps

The Illinois mud flap law has been temporarily hung-up. As passed in September, 1955, it requires "contour" mud guards on all trucks come Jan. 1, 1957 (or when, after that date, existing mud guards were replaced). A temporary injunction was obtained in a state Circuit Court. Pending further action, Central Motor Freight Assn. wants all the details fleet operators can tell them about the contour-type mud guards. Such information as costs, durability, maintenance, value, etc. is urgently needed.

## Rowan, Drew, Reindollar

Three leaders of highway transportation died last month. James F. Rowan was general manager of ATA's Movers Conference of America and executive secretary of the Household Goods Carriers Bureau. Verne Drew was special representa-



New president and chief executive officer of Reynolds Mfg. Co., Springfield, Ill., is George T. Fox. He steps into the spot left vacant by the firm's founder, T. F. Reynolds, who now becomes honorary chairman of the board. Fox has been in charge of the brake drum and tandem divisions of the company. Reyco tandem suspensions and brake drums are now handled by a record 147 warehousing distributors.

tive of the Truck-Trailer Manufacturers Assn. on various committees whose work affected the trucking industry. He had been earlier Director of Research and consultant to the Fruehauf Trailer Co. Robert M. Reindollar was immediate past president of the American Road Builders' Assn. and former chairman of the Maryland State Roads Commission.

## Highway Transport in Mexico

Truck registrations in Mexico have gone up about 900 per cent since 1939—from 18,130 to 194,491. Bus increase has been as spectacular—from 6170 in 1939 to 20,093 in 1955.

## Accident Rates

Interstate Commerce Commission is now tabulating accident frequency rates for Class I carriers. These rates are based on accidents reported to the ICC where damage is in excess of \$100 or those that result in fatalities or injuries. For property carriers, the first quarter 1956 rate is 0.42 accidents per 100,000 vehicle miles. Second quarter rate declined to 0.31. For passenger carriers, the second quarter rate was calculated at 0.47.

## Railroad Truck Operation

New York Central now has authority to operate a truck fleet for 1cl freight in New York, Massachusetts, (TURN TO PAGE 152, PLEASE)



For sometime, White's Freightliner Division in Portland, Ore., has been featuring its Spacemaker models with bumper-to-back-of-cab dimension of 48 in. Newest addition to the series is this "Penthouse" sleeper. It can take an 8½-ft dromedary box plus a 35-ft semi-trailer and still be within a 50-ft overall length. Other versions accommodate longer dromedary bodies or can handle two 24-ft trailers with a 60-ft overall length. All are powered by horizontal diesel engines mounted amidships in the frame.

# Well Done- ROADEO CHAMPIONS!

Now there's a new line-up of Roadeo Champions to represent the trucking industry—and they carry their titles well!

This year's Truck Roadeo activity reached a new high in competition, prestige, and interest. And the new champions tell a magnificent story of safety—professional skill—character. White pays tribute to these Roadeo Champions—urges a start right now to make next year's Roadeos bigger and better than ever.



**WILLIAM METSCH** is a typical Roadeo Champion. He drives for the Geo. F. Alger Co., in Chicago . . . has a 12-year, 250,000 mile safety record . . . won the national single axle semi-trailer championship at New York.

## WHITE 3000 . . . Driven by Straight Truck Roadeo Finalist



The truck that city drivers prefer for maneuverability, driving ease and safety—the White 3000—was driven to the finals of the national straight truck roadeo competition by Albert S. Burnette, of Super Service Motor Freight Co. He's Tennessee state champion!

## Another Champ for "The Line of Champions"



Roadeo Champion Bill Metsch is greeted by President A. C. Scott, of the Geo. F. Alger Co., Detroit, with another all-time champion, Cas Leske, Illinois straight truck champion, Alex Adamski, also of the "Line of Champions" and a 5-time national titlist, and other Alger officials.

## Western Champion Drives WHITE-Freightliner



Vern Carlson, of Westland Oil Co., won the "Western" Truck and Full Trailer championship in the Montana Truck Roadeo driving a light-weight White-Freightliner. Vern has driven nearly 1½-million miles—over a 13-year span—without accidents.



## First Choice of the "Pros"

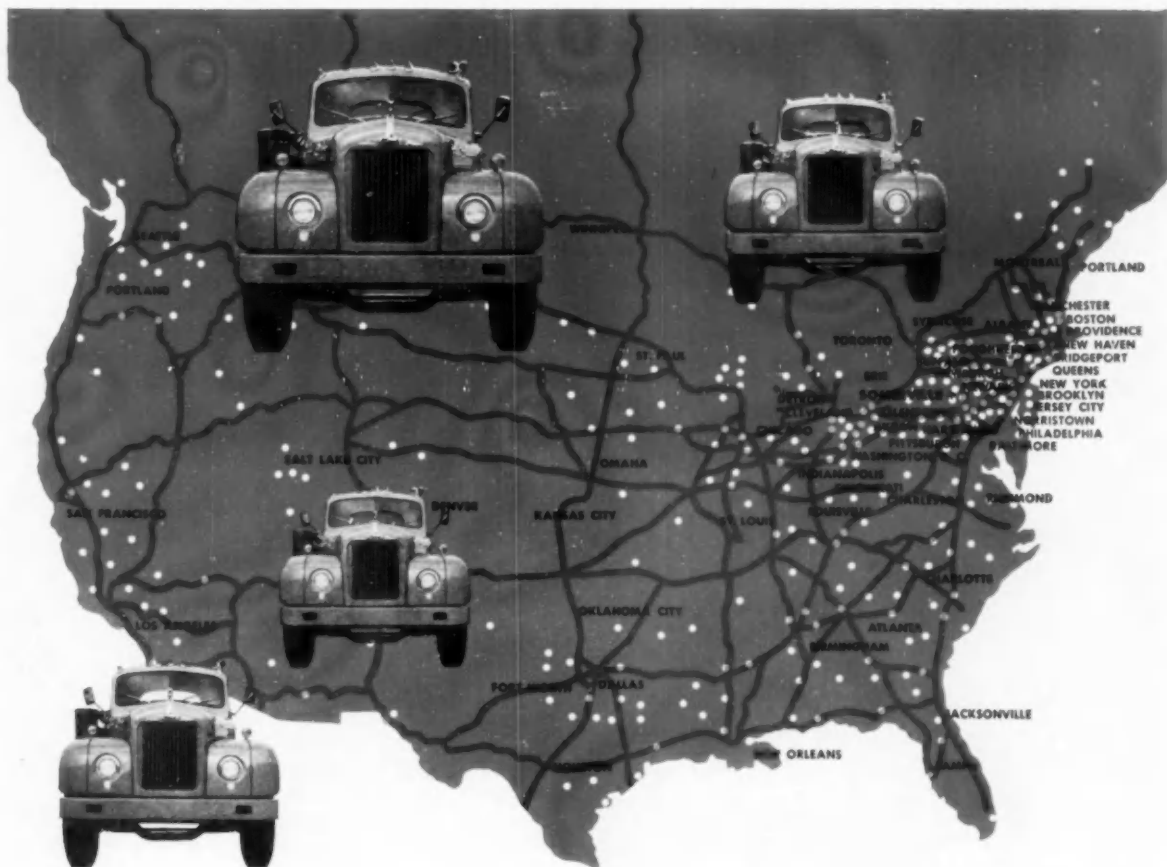
WHITE TRACTORS have always figured prominently in Roadeo competition. This year, of 16 finalists in the national "tandem" class, 7 drove Whites . . . of 17 "single-axle" finalists, 6 drove Whites—more than any other make.

**THE WHITE MOTOR COMPANY • Cleveland 1, Ohio**

FOR MORE THAN 55 YEARS THE GREATEST NAME IN TRUCKS

# 1956 New Truck Registrations by Makes by States

STATE AND MONTH	Brockway	Chevrolet	Diamond T	Dodge	Ford	G.M.C.	International	Mack	Reo	Studebaker	White	Willis Jeep	Willis Truck	All Others	Total
Alabama	Sept. 404	4	43	289	80	199	18	1	2	9	2	7	6	1,044	
9 Mos.	4,786	18	637	3,591	1,601	1,240	154	12	56	140	45	56	95	12,391	
Arizona	Sept. 289	2	62	214	78	51	5	1	11	1	8	17	12	729	
9 Mos.	2,137	13	397	1,562	673	455	32	10	90	45	62	135	100	5,711	
Arkansas	Sept. 595	3	51	518	176	167	5	1	13	7	4	9	12,853	6,801	
9 Mos.	5,030	34	543	4,046	1,339	1,405	47	1	183	72	56	39	237	69,749	
California	Sept. 2,309	26	470	2,263	645	496	98	25	62	42	86	110	216	9,906	
9 Mos.	25,070	278	4,877	21,970	6,525	5,082	308	232	724	621	802	1,144	2,116	8,851	
Colorado	Sept. 297	2	38	241	96	107	8	1	13	14	39	46	4	668	
9 Mos.	3,202	35	529	2,375	798	922	81	17	97	81	282	359	93	7,084	
Connecticut	Sept. 1	185	4	176	46	117	21	9	11	21	9	15	18	2,448	
9 Mos.	2,000	81	513	1,650	637	1,092	239	56	94	258	106	196	191	6,801	
Delaware	Sept. 91	9	57	154	512	238	320	88	1	16	45	33	19	1,213	
9 Mos.	871	9	57	154	512	238	320	88	1	16	45	33	19	1,213	
District of Columbia	Sept. 45	2	138	828	208	286	33	18	6	68	7	38	50	1,929	
9 Mos.	547	7	106	714	170	197	34	14	30	24	33	59	48	2,227	
Florida	Sept. 1	6,686	66	6,507	1,805	1,852	435	129	222	382	263	472	290	20,147	
9 Mos.	767	18	83	701	226	1,852	27	13	27	49	14	15	2,087	20,496	
Georgia	Sept. 2	6,854	54	1,102	7,309	2,143	289	22	189	289	111	124	49	20,496	
9 Mos.	175	46	142	85	74	5	19	4	16	25	7	571	37	4,765	
Idaho	Sept. 1,460	4	384	1,172	525	668	32	1	131	38	96	219	37	4,765	
9 Mos.	885	26	150	849	240	459	12	3	24	52	17	11	23	2,751	
Illinois	Sept. 9,181	345	1,850	8,448	2,544	4,682	266	80	304	496	171	171	361	28,660	
9 Mos.	655	14	101	546	132	263	30	14	42	55	11	16	23	1,902	
Indiana	Sept. 6,563	145	1,195	5,560	1,686	3,393	258	90	456	613	83	131	202	20,386	
9 Mos.	346	9	52	301	96	1	9	6	1	1	1	1	1	1,003	
Iowa	Sept. 432	1	34	357	64	164	12	13	10	1	12	3	1,093	10,544	
9 Mos.	3,875	21	458	3,527	890	1,531	16	31	122	93	30	110	44	10,748	
Kansas	Sept. 406	90	407	127	111	10	4	6	16	16	27	5	1,185	11,255	
9 Mos.	4,076	26	632	3,282	1,281	1,328	77	21	100	114	127	150	41	11,255	
Kentucky	Sept. 676	5	134	597	159	149	17	1	10	10	10	10	35	15,779	
9 Mos.	6,255	50	747	5,236	1,481	1,398	138	22	123	107	100	100	35	15,779	
Louisiana	Sept. 193	37	157	61	129	6	9	4	9	4	15	7	618	4,747	
9 Mos.	1,355	4	353	1,275	468	728	58	3	75	47	89	166	90	4,747	
Maine	Sept. 1	283	67	227	78	129	25	5	3	13	4	8	11	852	
9 Mos.	2,650	10	797	2,584	585	1,100	250	62	80	152	46	79	67	8,454	
Maryland	Sept. 3	292	9	383	122	177	45	20	2	32	32	49	47	1,275	
9 Mos.	3,120	106	1,177	3,876	1,310	1,789	482	90	96	439	161	295	32	13,296	
Massachusetts	Sept. 1,015	20	327	1,034	342	283	26	19	48	13	10	10	10	1,730	
9 Mos.	6,783	173	2,409	6,559	2,549	2,082	236	13	96	388	239	275	327	26,460	
Michigan	Sept. 391	5	72	388	124	238	11	6	8	26	10	22	37	1,336	
9 Mos.	4,154	65	728	4,316	1,140	2,103	102	46	177	93	74	165	181	13,354	
Minnesota	Sept. 469	53	391	142	206	7	14	6	14	6	3	2	1,299	12,032	
9 Mos.	4,723	5	496	3,946	1,228	1,413	60	2	134	27	59	39	10	1,730	
Mississippi	Sept. 700	6	101	477	187	197	5	3	12	14	12	6	10	1,730	
9 Mos.	6,974	51	941	5,239	1,628	2,340	68	37	163	367	78	82	105	16,551	
Missouri	Sept. 199	1	41	250	69	108	11	1	11	1	15	47	8	765	
9 Mos.	1,579	2	334	1,550	562	1,009	54	15	95	39	127	288	70	5,724	
Montana	Sept. 179	9	18	178	52	145	6	7	10	9	15	9	9	637	
9 Mos.	2,012	68	284	1,815	545	1,235	6	27	74	113	58	73	67	6,377	
Nebraska	Sept. 77	5	248	548	408	207	24	1	4	1	2	8	3	284	
9 Mos.	705	5	248	548	408	207	24	1	4	1	2	8	3	284	
Nevada	Sept. 1	705	5	248	548	408	207	24	1	4	1	2	8	2,438	
9 Mos.	775	5	248	548	408	207	24	1	4	1	2	8	3	2,438	
New Hampshire	Sept. 2	775	5	248	548	408	207	24	1	4	1	2	8	2,438	
9 Mos.	482	17	204	490	179	231	72	9	14	85	17	21	49	1,878	
New Jersey	Sept. 4,817	149	1,656	4,760	1,695	2,085	548	56	124	827	129	217	330	17,230	
9 Mos.	258	1	41	192	82	61	13	4	4	6	13	24	4	699	
New Mexico	Sept. 2,363	10	288	1,568	752	493	95	9	32	51	86	142	40	5,949	
9 Mos.	29	857	9	277	1,015	357	675	114	23	76	41	49	119	5,769	
New York	Sept. 9,625	147	3,328	9,858	3,516	5,413	1,271	322	254	1,064	441	722	76	37,200	
9 Mos.	365	98	181	65	155	69	15	9	14	7	18	6	2,014	17,615	
North Carolina	Sept. 6,419	137	949	5,560	1,586	1,721	447	25	224	276	103	116	52	17,615	
9 Mos.	143	25	110	43	111	1	5	44	4	23	42	9	2	453	
North Dakota	Sept. 1,139	234	1,093	297	919	1	11	17	67	28	32	58	2	3,810	
9 Mos.	872	12	177	845	219	410	41	11	17	67	28	32	58	2,709	
Ohio	Sept. 1	0,300	134	2,222	9,399	2,390	4,310	478	155	256	228	376	358	30,405	
9 Mos.	689	58	445	116	173	6	4	9	11	6	5	6	5	1,509	
Oklahoma	Sept. 5,195	11	479	3,996	1,111	1,501	90	35	102	149	38	43	65	12,803	
9 Mos.	344	71	71	320	139	190	10	1	14	21	35	80	25	1,250	
Oregon	Sept. 3,585	71	737	3,025	1,426	1,640	156	20	276	359	190	485	398	12,376	
9 Mos.	1,005	22	336	892	254	476	140	18	41	65	53	104	36	3,445	
Pennsylvania	Sept. 96	9,477	202	2,946	8,185	2,937	4,820	1,074	389	1,037	380	855	331	33,868	
9 Mos.	56	3	20	73	31	38	6	3	2	2	3	4	6	249	
Rhode Island	Sept. 550	23	202	599	209	311	68	15	20	33	22	40	47	2,139	
9 Mos.	222	35	209	56	57	15	2	1	7	2	1	1	1	607	
South Carolina	Sept. 3,146	449	2,675	673	670	167	4	68	97	30	25	19	6,031	416	
9 Mos.	113	2	17	92	50	118	1	4	1	7	9	2	4	3,782	
South Dakota	Sept. 1,065	15	180	991	350	925	2	11	34	7	69	80	53	1,587	
9 Mos.	490	2	78	383	167	163	40	10	8	231	5	8	4	1,587	
Tennessee	Sept. 4,658	32	801	3,889	1,443	1,454	223	32	83	444	71	78	22	13,328	
9 Mos.	2,698	35	229	2,081	502	749	67	10	48	101	61	32	24	6,668	
Texas	Sept. 22,648	228	1,948	16,605	4,011	5,625	884	61	399	1,033	278	271	180	53,872	
9 Mos.	161	3	39	136	53	71	6	3	3	9	17	13	10	521	
Utah	Sept. 1,250	10	327	974	445	492	44	17	51	61	62	108	102	3,942	
9 Mos.	63	5	17	53	21	28	1	1	4	2	16	21	5	2,582	
Vermont	Sept. 10	623	5	157	645	295	419	46	3	44	8	128	166	34	2,582
9 Mos.	450	2	87	369	63	180	25	1	10	27	22	29	8	1,263	
Virginia	Sept. 2	4,746	12	4,116	1,505	419	72	170	287	149	185	56	14,188	11,797	
9 Mos.	525	1	127	504	226	224	23	4	20	18	25	52	38	2,899	
Washington	Sept. 3,367	38	1,028	3,200	1,715	1,453	155	42	133	100	133	324	289	11,975	
9 Mos.	229	1	68	270	68	106	5	1	6	6	30	45	8	849	
West Virginia	Sept. 2,125	3	556	2,220	758	780	48	21	93	105	242	293	42	7,286	
9 Mos.	333	1	57	311	66	201	7	2	12	6	17	15	14	1,042	
Wisconsin	Sept. 3,742	43	638	3,720	1,081	2,283	154	37	123	123	76	148	138	12,503	
9 Mos.	16	116	45	116	45	116	45	116	45	116	45	116	45	412	
Wyoming	Sept. 857	8	165	866	350	461	15	15	35	26	80	128	12	3,120	
Total	September, 1956	48	24,146	286	4,394	21,587	6,583	9,156	1,058	235	635	1,208	861	1,201	72,420
Total	September, 1955	86	32,133	330	5,664	28,443	8,560	8,261	877	344	834	1,468	831	1,326	89,924
Total	9 Months, 1956	711	229,592	3,046	44,098	204,324	6								



## everywhere a **MACK** goes ...there are **MACK** parts ...there's **MACK** service

Mack trucks can be serviced through 56 Direct Factory Branches and nearly 300 Distributors.

- ★ parts in a hurry
- ★ reduced inventory stocks
- ★ the proper tools for the job
- ★ Mack service experts

To assure you of the ultimate in parts and service—no matter what year or model Macks you operate—Mack has worked out a smoothly operating program for direct action service and supply.

First, your local **MACK DISTRIBUTOR** carries a carefully balanced stock of parts essential for his own local operation.

Next, the local **MACK FACTORY BRANCH** maintains a full inventory of parts, and stands behind every distributor for immediate on-call service. The branches are fortified by complete parts and

accessory inventories maintained in **MACK'S DIVISIONAL DEPOTS**.

Finally, there's **MACK PARTS HEADQUARTERS**—Mack's huge spare parts center at Somerville, N. J., with 423,000 sq. ft. of parts—over 60,000 different items and assemblies, totalling millions in number. There is virtually no Mack part that is not available through Somerville. Mack Trucks, Inc., Plainfield, New Jersey. In Canada: Mack Trucks of Canada, Ltd.

**\*For emergencies — practically any Mack part in 24 hours!**  
The huge inventories and streamlined replacement service of the Somerville, N. J. Mack Parts Headquarters stand squarely behind every Mack truck ever built.

## **MACK** first name for **TRUCKS**

4590

93



# The Fleet Engineer: Part of Management

Continued from Page 75

or decrease in the volume of business. Actual expenditures are computed on the same basis as the projections, and are then compared with the estimates and corrections made for any variances.

Budgets should be thought of as "yardsticks," not "straight jack-

ets" and should have a reasonable degree of flexibility.

## Fit the Truck to the Job

In any efficient program of operation and maintenance, certain responsibilities belong entirely to the Fleet Engineer while others are

delegated by him to his supervisors.

Management leans heaviest on the Fleet Engineer in the selection of vehicles. There is so much already available on this phase of fleet operation that there is little I can add to it. However, it is worth pointing out the importance of a complete, accurate and detailed study of the conditions under which the vehicle will operate. In making this study, the direction in which long term company policy is headed is a factor which is all too often neglected. The Fleet Engineer must know of any proposed changes in the type of operation well in advance if he is to select the proper vehicle for the job.

Most Fleet Engineers have developed yardsticks for selection of vehicles for their particular fleets, giving proper emphasis to those factors which experience has shown to be of prime importance in their operation. Among them are found (1) reliability in starting, particularly for emergency vehicles, (2) reserve power for better-than-average grades, (3) maneuverability for dock work or congested city areas, (4) overdrive or two-speed axles for level highways at maximum speeds, (5) additional generator output for low speed vehicles with high accessory or lighting load, (6) efficient power take-off for auxiliary power transmission.

Many fleets take advantage of the excellent engineering facilities offered by the major truck and bus manufacturers to assist them in vehicle selection. This assistance to smaller fleets equips them to hold their own in our fast growing and ever-changing industry. Other fleets rely upon selection factors and rated tests based upon their own experience or the good experience of competition in the same or similar fields of transportation.

## How to Choose a Shop

In facing the selection of new plant, garages, shops or other repair facilities, the Fleet Engineer should give careful study and analysis to the following factors:

- (1) Amount of capital invest-
- (TURN TO PAGE 96, PLEASE)



This "Universal" lock can be used on right or left hand installations. It is designed and constructed to withstand hard service usage for a long period of time.

Three point "rattleproof" locking is afforded. Liberal slide bolt travel assures a positive grip on body sills. Constructed of high quality steel throughout.

### \* No. 5624-52 Padlock Type Handle for Van Door Locks

The smooth flowing lines of this husky handle are in keeping with today's body design trends. Flush escutcheon plate mounting face.

Finishes — Plain, Cadmium, Cadmium Lock with Chrome Handle.

Write for the New Eberhard Catalog with complete information and specifications.

\* This handle is included with Universal Door Lock. Can be obtained separately.

**EBERHARD MANUFACTURING COMPANY**  
EVARTS AVE. • CLEVELAND 4, OHIO  
Division of the Eastern Malleable Iron Company

**LONGRUN**



TRUCK BODY  
HARDWARE BY

**EBERHARD**

THE MOST COMPLETE LINE AVAILABLE







## "Tripled period between overhauls with Cities Service C-300 Motor Oil!"

**A report from Mid-States Steel and Wire Co., Crawfordsville, Indiana.**

Hauling 35,000-pound loads of wire within a 300-mile radius of the Crawfordsville plant, trucks of the Mid-States Steel and Wire Company take a steady beating.

But you'd never know it from their overhaul period! . . . Not since they switched to Cities Service C-300 Motor Oil.

Says Foreman Harold Holman: "A few years ago, before we started using C-300, our trucks were averaging 40-50,000 miles before overhaul. But with C-300 Motor Oil, we've been able to extend overhaul periods up to 140,000 miles! In fact, one truck was recently traded off after it had gone 325,000 miles with original pistons and only one change of rings!

"We're also extremely pleased with Trojan H-2 Multi-Purpose Grease. Formerly, we had to pack the wheels every 10,000 miles and suffered from water penetration. Today,

with Trojan H-2, we only need to pack them every 20,000 miles, and we're getting far better protection against water. Needless to say, Cities Service has helped us save a lot of money through reduced maintenance expenses."

Again and again, fleet operators report extraordinary results such as these with Cities Service lubricants. If you'd like to see what these lubricants can do for you, talk with your local Cities Service representative or write Cities Service Oil Company, Sixty Wall Tower, New York 5, N. Y.

**THIS LUBE JOB** with Cities Service Trojan H-2 Grease will last longer and give greater protection than previous grease, according to Mid-States. They now pack wheels every 20,000 miles. Formerly they did it every 10,000 miles.



**TRUCK IN BACKGROUND,** like entire Mid-States fleet, hauls maximum 35,000-pound loads of wire such as this. Nevertheless, one unit recently ran 325,000 miles with original pistons and only one ring change, using Cities Service C-300 Motor Oil!

**CITIES SERVICE**  
QUALITY PETROLEUM PRODUCTS

## The Fleet Engineer

Continued from Page 94

ment required and whether it is best to lease, or to build, or to build, sell and lease back; (2) Location of the facility to provide minimum dead-head transportation with maximum service; (3) Adequate area at reasonable cost; (4) Adequate supply of skilled me-

chanics and workers; (5) Easily available utility services; (6) Reasonable taxes; (7) Reasonable zoning; (8) Availability of parts and materials.

### The Maintenance Program

One of the Fleet Engineer's major jobs is that of planning, establishing and administering an effective fleet maintenance program. Basically this calls for answers to the following questions:

How are the vehicles to be serviced? What service is to be performed? When will servicing be done? Where are the units to be serviced?

The answer to how the vehicles are to be serviced requires a careful study of whether such maintenance shall be performed by your own organization, by a subsidiary service company, purchased from outside sources specializing in this field, or any combination of the three.

Next to be considered is a cost determination based on (1) labor charges (2) material costs (3) production time (4) tool costs (5) depreciation (6) administration (7) overhead and (8) freight charges. Then add the reasonable percentage for profit for each of the methods under study.

When considering having maintenance performed by an organization other than your own, give considered weight to such factors as (1) availability (2) reliability (3) quality of product and time required for delivery. Consider potential savings in (1) plant space (2) reduction in staff (3) reduction in paper work (4) reduction in investment in plant facility (5) elimination of the intangible cost of the executive time that would be devoted to this activity.

Then determine a policy.

### Planning the Maintenance

Careful planning of the extent and the volume of the anticipated work load is needed. Consider the number, type and size of units to be serviced and maintained. Is the program all-inclusive from passenger cars to material handling equipment? Does it include everything from a lube job to a major rebuild? The answers will depend on policy, the servicing and repair facilities available, and the work force employed.

Few fleets, even the very largest, perform all of the servicing and maintenance for all of their equipment. The point at which outside services are purchased is determined on the basis of requirements over and above normal work output.

The question of when to service and maintain equipment has been

(TURN TO PAGE 98, PLEASE)

*First choice of owners  
...and drivers!*



**STEWART-WARNER**

# TRUCK TACHOMETERS

**Accurate!** Positive electric drive assures accurate speed indications. Makes safer, more economical operation possible!



★ See your dealer  
or write:

**Dependable!** Manufactured to highest standards of quality. Designed and engineered for long, reliable service. Vibration-proof . . . no flexible shafts, no oscillators to break or need repairs!

**Easy to Install!** No special tools or changes in vehicle's electrical system required. Will not affect engine spark or timing at any speed.

**Easy to Read!** Large 3" diameter, illuminated face dial. Steady pointer has full 270° travel for quick reading. Adjustable red markers help you stay inside "economy range."

**STEWART-WARNER**  
Instrument Division

Dept. DD-126, 1840 Diversey Parkway, Chicago 14, Ill.

FORTUNATELY, HENDERSON,  
I ALWAYS CARRY A  
SPARE BATTERY WITH  
U.S. SENTINEL SEPARATORS



Tom  
HENDERSON

NEW PLASTIC RIBS GIVE GREAT MECHANICAL STRENGTH



## New Plastic Discovery gives batteries greater starting power

Henderson's helper is destined for greatness. But most operators would do better if their trucks and buses were equipped, from the start, with batteries that carry the Sentinel tag. That's the best way to eliminate downtime caused by battery failure... particularly now when temperatures run low.

U. S. Sentinel Battery Separators are part and parcel of the best batteries made today. Made with a new plastic discovery, they prevent shorts caused by oxidation. They are extremely resistant to battery acids, plate pressures, heat and cold. Be sure the next time you buy batteries to insist on those bearing the Sentinel tag. That means it's a good battery. Another quality product of United States Rubber, Rockefeller Center, New York 20, N. Y.



Electrical Wire & Cable Department

# United States Rubber



Hot solution at 300 p.s.i. from Malsbary 250 quickly removes stubborn grease, mud, dirt, ice and grime (in winter) from tractor and 38,000-lb. payload trailer.

## How to Reduce Truck Cleaning Costs — Use Malsbary HPC Cleaners

There are two major items in cleaning costs: Actual expense of cleaning, which is 50 to 80% labor; and hauling time lost while trucks are being cleaned. You can cut both with a Malsbary 250 HPC cleaner, just as Mushroom Transportation Co., Philadelphia, does.

Mushroom operates nearly 600 pieces of equipment, including 250 trailers, 95 road tractors, 125 pick-up and delivery trucks. Bulk of hauling is "dirty cargo"—charcoal, hides, oils, paints, cement, chemicals, building materials. Its Malsbary 250 steam cleans insides of trailers and trucks after "dirty cargo" hauls; cleans repair parts and fifth wheels; keeps equipment exterior spic and span; prepares chassis for painting.

"Naturally we're concerned with the big 38,000-pound payload jobs which give us our biggest profits—and we are more than satisfied with the short time the Malsbary 250 takes to clean them up for the next haul. There's no better or more economical way to do this dirty work," says Wm. Cutare, shop superintendent.

### Why Malsbary HPC Saves Time

HPC (meaning high pressure combination) combines pumped hydraulic and thermal pressures, gives you a 300 to 400-lb. cleaning blast, hot or cold, with or without solution. This HPC blast cleans twice as fast as the largest steam vapor cleaner; 4 to 10 times faster than most, easily handles jobs other cleaners can't touch—and at  $\frac{1}{2}$  to  $\frac{1}{10}$ th the cost. HPC cleaners also supply wet steam for degassing and heating; low pressure hot water for rinsing.



Full swivel steam gun with orifice in nozzle, assures straight ahead, hard-hitting stream; makes short work of parts cleaning.

Why not put HPC to work for you? Ask your Malsbary dealer for a demonstration NOW, or write today for free literature.



Room K12, 845 92nd Ave., Oakland 3, Calif.

## The Fleet Engineer

Continued from Page 96

the subject of much discussion lately. Some fleet operators favor service and maintenance on a carefully predetermined time or mileage basis, and others favor it on the basis of carefully made diagnostic tests. Each argument has much merit, and the final answer may well lie in a system combining the best features of each. (For comment on this discussion, see CCJ, May, page 68, and Oct., page 9.)

The question as to where servicing and maintenance is to be performed largely depends on (1) the nature of the company's operation, (2) degree to which it is centralized, (3) policy decisions under how? what? and when?, (4) concentration of equipment within a given area, (5) chances of scheduling and routing equipment through a given service and maintenance facility on a planned economic basis.

Many fleets perform service and maintenance up to, but not including, major components or engine rebuild on a local basis in repair facilities with a small mechanical force and limited instrumentation, funneling all major work and component rebuilding to a central service and maintenance facility.

An important defect in this system is that lack of instrumentation and adequate tests at the local shops result in unnecessary repair jobs and thus increased costs.

### Who Does What, When?

In his role as administrator, the Fleet Engineer must guide and plan the work of supervisors, mechanics, and other members of the staff. This requires him to be familiar with such factors as internal organizational structure, effective delegation, control and communication, and the design and installation of record systems. The number and coverage of reports should be limited to those needed for information or control or those required by a regulatory body. Their content should be reviewed

(TURN TO PAGE 102, PLEASE)



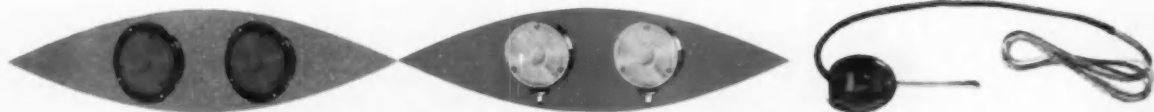
wherever you see them



... trucks are safer  
with *Guide*  
turn signals

Safer—on the road, off the road! And that's only one reason why leading truck manufacturers specify Guide Turn Signals as original equipment! Guide Turn Signals are ruggedly dependable in all weather... meet

state regulations (optically) where required. Guide Turn Signals are your clear signal to safer truck operation, more profitable mileage! Available through United Motors Service outlets and most truck dealers.



Set consists of four lamps, self-cancelling switch... choice of bracket or flush mounting for rear lamps

**GUIDE LAMP DIVISION**  **GENERAL MOTORS CORPORATION • ANDERSON, INDIANA**

COMMERCIAL CAR JOURNAL, December, 1956



# Why **TDA**<sup>®</sup> is the

## **World's Largest Manufacturer of Driving Axles for Medium and Heavy Duty Commercial Vehicles**

In its many years of service to American industry, Timken-Detroit<sup>®</sup> has produced more than 6,300,000 driving assemblies for powered vehicles (industrial, agricultural or automotive). The "Ten Automotive Firsts" on the opposite page are but a few of the significant results of TDA research and development.



# these 10 Automotive Firsts have established TDA leadership

in producing over

# 5,000,000

## Driving Axles for America's Trucks and Busses

## plus 1,300,000 for other powered units!

**1. Tandem Driving Axles**—TDA developed the first tandem driving axles for the industry to increase the capacity of vehicles.

**2. The Double-Reduction Axle** (both single and two-speed types)—TDA developed the first double-reduction axles, principally to permit higher axle shaft torque values for nominal pinion input torques.

**3. The 3-for-1 Axle**—TDA introduced the principle of interchangeability of three optional drives in the same housing... single-reduction... single-speed double-reduction... and two-speed double-reduction.

**4. Heavy-Duty Hypoid Gearing**—This successful TDA innovation made possible larger, stronger, longer-wearing pinions of greater torque capacity for the same tooth load at the pitch line than corresponding spiral bevel pinions.

**5. The Power-Shifted Two-Speed Axle**—TDA's power-shift made the two-speed axle universally acceptable. It simplified driver operation, providing improved vehicle control and safety.

**6. Unit Mounted "P" Series Power Brake**—This highly efficient, compact, easily maintained air brake with lightweight fabricated steel shoes has all parts "unit mounted" on a spider.

**7. Tapered Brake Linings**—TDA "Econo-Liner" tapered brake linings, first to offer maximum thickness in the area of greatest wear which resulted in uniform thickness when worn.

**8. First 100,000 Mile Guaranteed Axle Shaft**—Torsion flow forging, controlled gradient hardness heat treating and shrouded spline design make the TDA shaft the best in the industry; first to be guaranteed for 100,000 miles.

**9. The Tubular Trailer Axle**—TDA adapted the tubular form to trailer axles to make a lighter, stronger axle than any previously available.

**10. The "Wide Range" Two-Speed Axle**—TDA was the first to develop two-speed axles with ratios of 2 to 1 and 2½ to 1 between the upper and lower ranges, to overcome the basic limitations of mechanical and automatic transmissions.

©1956. R S & A Company

**TIMKEN**  
*Detroit*  
**AXLES**

TIMKEN-DETROIT AXLE DIVISION  
ROCKWELL SPRING AND AXLE COMPANY

DETROIT 32, MICHIGAN

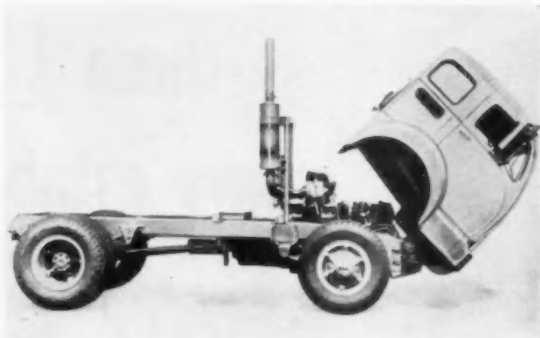


Plants at: Detroit, Michigan  
Oshkosh, Wisconsin • Utica, New York  
Ashtabula, Kenton and Newark, Ohio  
New Castle, Pennsylvania.

**WORLD'S LARGEST MANUFACTURER OF AXLES  
FOR TRUCKS, BUSES AND TRAILERS**

### 3000 Plus JT6B-15

White Motor Co., Cleveland, Ohio, announces the availability of its 3000 Series tractor with the 175-hp Cummins JT6B-15 turbocharged diesel engine. Other changes announced in the 3000 units include a 4-in. higher cab, automatic thermostat controlled air system, optional wider tread front axles.



### "Driving a School Bus Isn't Child's Play"

Takes a lot more than an amateur to run an obstacle course bristling with traffic lights, erratic drivers and noisy kids every day. Yet school bus operators take it in stride — and stay within a tight schedule to boot! Half the job is accomplished right in the garage by the fleet operator who keeps his buses running with peak-performance parts. That's why in one large city, for example, 8 out

of 9 bus companies specify BLUE STREAK heavy-duty ignition parts. This is the one brand expressly designed to take merciless stop-and-go treatment. Replace *your* ignition parts with premium BLUE STREAK parts. For more information, write: Standard Motor Products, Inc. Long Island City 1, N. Y.

## BLUE STREAK

*Heavy-duty Ignition Parts for Fleets*

Coils • Condensers • Point Sets • Voltage Regulators • Switches  
Rotors • Distributor Heads • Brush Sets • Wire & Cable



## The Fleet Engineer

Continued from Page 98

periodically, with an eye to simplifying, consolidating or eliminating them. Careful study should be made of the possibility of mechanizing the reporting and record-keeping system to reduce costs and provide greater speed and accuracy.

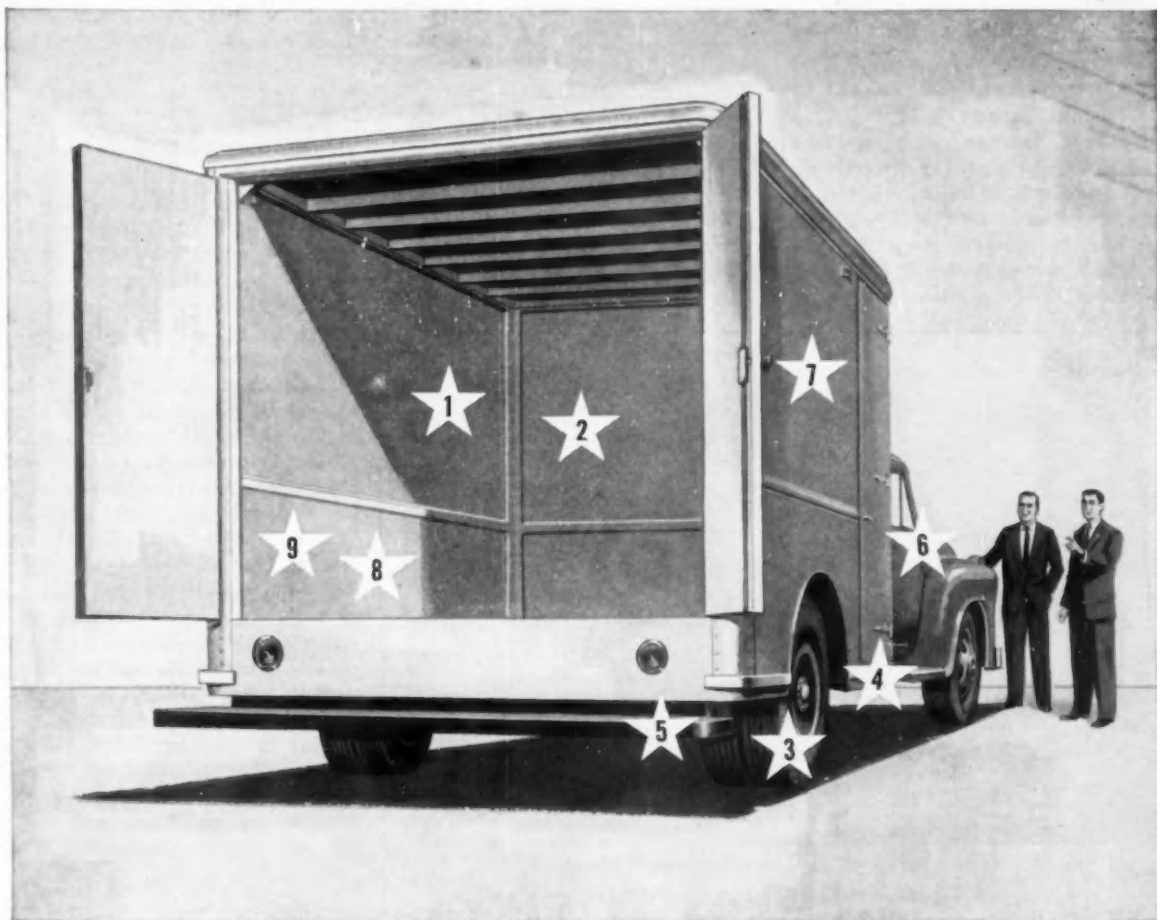
It is the Fleet Engineer's responsibility to see to it that service and maintenance facilities provide adequate space for supervisory and clerical workers. This space must be clean, dry, adequately heated or cooled, well-ventilated, well-lighted with adequate rest and washrooms.

Tools and equipment must be adequate to perform all work scheduled or required. All tools and equipment should be well maintained, serviced and readily available. A tool check system should be used for control. The Fleet Engineer should keep up with new developments in test equipment and instruments and the potential economies they offer in the service shop.

### Greater Productivity

A major limitation in the expansion and use of adequate instrumentation, however, is the shortage of technically trained and experienced personnel. (See "Help Wanted: More and Better Mechanics", Oct., page 80, also see page 76 of this issue.) We must, therefore, get more mileage from the engineering and technical force we now have. This will require better management.

(TURN TO PAGE 104, PLEASE)



## look at the ways magnesium saves you money!

- ★ 1. Greater cubic capacity
  - ★ 2. Increased payload
  - ★ 3. Reduced tire cost
  - ★ 4. Lower chassis cost
  - ★ 5. Better fuel economy
  - ★ 6. Less wear on engine, transmission
  - ★ 7. Higher resistance to dents
  - ★ 8. No space-taking liners
  - ★ 9. No hindering body posts
- plus
- Longer-lasting "new" appearance
  - Superior structural strength
  - Lower tax rates
  - Lower insurance premiums
  - Baked mill prime finish protects against corrosion

**Magnesium Monocoque truck bodies weigh up to 50% less—give you lower operating and maintenance costs, higher profits per trip**

Yes, you save money in all these different ways, and for one good reason: lighter weight. Truck bodies made with magnesium, the world's lightest structural metal, are stronger and more durable than steel or aluminum bodies—yet they weigh much less. And that big savings in truck weight can mean big savings in cost for you.

**Magnesium Monocoque** simplified

thick sheet construction can actually add 34 cubic feet more interior capacity in a twelve-foot body. It can increase payload or decrease chassis cost. It can decrease fuel consumption and engine wear. In every way, it gives you a better truck to work with and a better profit per trip!

**Whether you operate** one truck or a fleet, you will want our new illustrated booklet on magnesium truck bodies. Contact your nearest Dow sales office or write THE DOW CHEMICAL COMPANY, Midland, Michigan, Magnesium Sales Department MA 374N-2.

you can depend on DOW MAGNESIUM



## The Fleet Engineer

Continued from Page 102

Communications must provide for understanding and a free flow of ideas. Certainly no directive or instruction is of any value if it is not understood by the person who is expected to carry it out.

Work methods should be standardized and performance time

determined. Quality and specifications should be established on a sound level. Production should be scheduled to provide maximum utilization of machine time and work force. Every effort should be made to avoid crash programs at premium rates.

The experience and "know-how" of mechanics must be given due consideration in every phase of planning; advantage should be taken of suggestions for short cuts and provisions made for careful

analysis of self-made tools and gadgets, with proper recognition for those whose ideas or improvisations are adopted for general use.

### Will You Help the Industry?

Two of the most important activities that are properly the concern of not only the Fleet Engineer but of every single individual interested in the continual growth and well-being of the motor transportation industry, namely good public relations and legislation.

You all know the importance of motor transportation to the entire economy. The substantial amounts of capital invested in rolling stock and plant, the extremely large amounts of payroll produced and the enormous taxes paid. Good public relations are your business. Carry the message of our industry to every one at every opportunity.

In the legislative field you as engineers can make a unique contribution by reason of your experience and training. At every level, federal, state and local legislators and their committees are seeking information on what often becomes the basis for legislation. There is a pressing need for additional spokesmen, for fresh faces and new ideas if our industry is to hold its own.

END

Please Resume Reading Page 76



**NEW All-Purpose**

# PREST-O-LITE

Trade-Mark

## Welding and Cutting Outfit



### WELDS, CUTS, HEATS

Here's a quick, economical unit for handling hundreds of everyday welding, cutting, and heating jobs around the garage, body shop, and service station. With the PREST-O-LITE Oxy-Acetylene Welding and Cutting Outfit, you can weld or cut anywhere. No electric power is needed. Cuts effortlessly through heavy steel; welds sheet metal and light plate. With the convenient new double-duty blowpipe, you simply change tips—in seconds—to switch from welding to cutting. No "extra" attachments or accessories are needed. Oxygen and acetylene available immediately in cylinders sized to meet your exact needs.

Straighten frames, build up worn parts, solder bodies, weld shafts, rods, manifolds—there's practically no limit to what you can do with this PREST-O-LITE outfit in your shop or garage.

Complete outfit includes "2-in-1" blowpipe, pressure regulators, hose, wrench, friction lighter, goggles, 1 cutting tip, 3 welding tips and full instructions. As illustrated, only \$76.50.

Write today for free descriptive booklet.

"Prest-O-Lite" is a registered trade-mark of Union Carbide and Carbon Corporation.

**LINDE AIR PRODUCTS COMPANY**

A Division of Union Carbide and Carbon Corporation

30 East 42nd Street



New York 17, N. Y.

### Solves Low-Height Problem



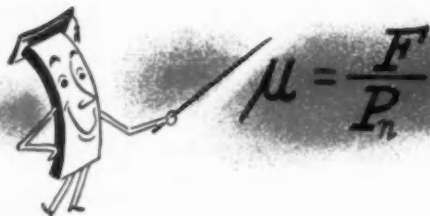
Ray's Creamery, Logansport, Ind., solved a loading problem with these Kold-Hold plate-equipped low height truck bodies built by Millington Truck Body Co. Ray's warehouse has low doors, required low trucks. These have overall inside height of 60 in., overall length of 12 ft. Milk cases stack four high in the bodies. Four reefer plates are used in body, each measures 48 in. long x 18 in. wide x 3½ in. thick.



# Johns-Manville Information Service Bulletin J-M 106

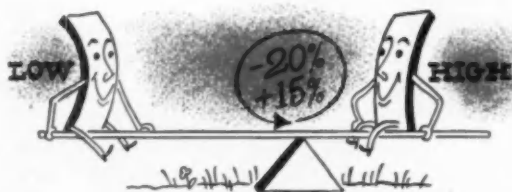
Prepared by the Automotive Friction Material Division

## The importance of Coefficient of Friction to the performance of your brakes



The degree of "stop-ability" built into a brake block is usually referred to by engineers as its Coefficient of Friction ( $\mu$ ).

Selecting a brake block of high Coefficient (possibly .55 as used in hilly sections) will usually give shortest stopping distances. But too-sudden stops and accompanying weight transfer of heavy payloads worry drivers. Also, higher friction blocks may affect other performance qualities such as long life, freedom from scoring and the fine, uniform friction stability found in blocks of medium, or lower friction.



Today, many individual brake mechanisms can be improved by skillfully balancing the braking effectiveness of each wheel through the use of Johns-Manville Brake Blocks of different Coefficients. Depending on the selection of high, medium or low friction, variations of 15 or 20 percent can be corrected. In turn, this simplifies balancing the en-

tire system so that all wheels work proportionately and give lowest cost-per-mile brake service.



Johns-Manville Field Engineers are available to help study your fleet operation and assist you in selecting the precise brake blocks which best match your particular operating conditions.

Recently one team of these experts was called in by a mid-west city transit fleet. The operators, who kept meticulous records, decided to act on new recommendations based on findings of a comprehensive engineering survey.



The results were startling! Not only were schedules improved and driver complaints eliminated, but Johns-Manville Brake Blocks helped reduce drum breakage and lining wear by 30%.

Write today for helpful information on any brake problem.

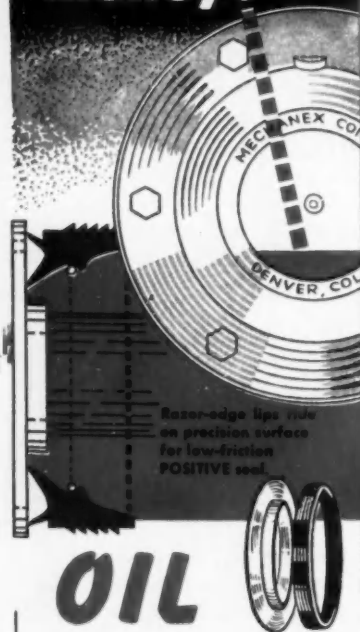
Address Automotive Manager,  
Johns-Manville, 22 East 40th Street,  
New York 16, New York.



## Johns-Manville *Asbestos* FRICTION MATERIALS

BRAKE LININGS • BRAKE BLOCKS • CLUTCH FACINGS

what color  
is YOUR  
money?



## OIL SAVES BEARINGS

MECHANEX—the original Wheel Oil Seal—cuts maintenance to the bone, puts good green dollars in your pocket. Why GUESS on bearing lubrication, when you can look through the window and SEE! Visible oil level—superior, precision-built hubcap—exclusive INTERLOCKING engagement ring and backing plate—positive protection for thousands of maintenance-free miles. Lowest replacement cost. That's why dollar-wise truck lines always specify MECHANEX—there's mighty big money in OIL!

Available on new equipment at all Trailer Manufacturers

Distributed by  
Trailer Branches and  
Leading Parts Suppliers



## New Products

Continued from Page 60

### P33. Exhaust System

Engwald Corp., Brooklyn, N. Y., has three new overhead exhaust systems specifically engineered for simultaneous garage-servicing of cars, trucks and buses. Systems may be adapted to any number of vehicles by simply adding the appropriate blowers and hoses. Pulling a rope brings the hose down to proper level for connection to exhaust tailpipe. When no longer required, each hose retracts by counterweights into individual overhead steel tubes which go to the master exhaust duct connected to the blower. Hoses are available in stainless steel, galvanized steel or crush-proof neoprene rubber.

### P34. Truck Scales

Taller & Cooper, Inc., Brooklyn, N. Y., announces a series of five vehicle scales for weighing trucks either in motion or stopped. Capacities range from 5000 to 300,000 lb. Units come ready to set in place in prepared pit. Electronic cells "sense" vehicle weight, record it on a variety of weight recording machines according to the fleet operator's needs.

### P35. Low Vacuum Gage

Velvac, Inc., Milwaukee, Wis., offers a new warning kit consisting of all necessary parts and fittings to bring vacuum-equipped tractors in line with the new ICC regulations. Complete with hook-up diagram the kit is available with either a 6 or 12-volt buzzer or red jeweled light for quiet operation.

### P36. Hard Facing Unit

Wall Colmonoy Corp., Detroit, has available a new metal spray unit of improved design for applying hard facing alloys and other metals in powder form. The unit features new metal flow rates and increased deposit efficiency. This model is designed for use in applying hard-facing powders to most types of steel (including stainless), cast iron and copper parts by the "Sprayweld" process. Metal spraying operations using aluminum, zinc, copper, nickel, stainless steel, brass, lead or high temperature braz-

ing alloys in powder form can also be readily handled by this unit.

### P37. Battery Tester

Fox Products Co., Philadelphia, has a new portable battery tester called "Multicheck." It is equipped with an extra terminal which makes direct overall voltage readings possible for 12 volt batteries. The cell prod permits individual cell voltage readings on both 6 and 12 volt batteries.

### P38. Drive Sockets

Snap-On Tools Corp., Kenosha, Wis., announces a new 1/2 in. square drive socket set with metal compartmented box. Tools are made of alloy steel and have been especially heat treated for added strength. Sockets are thin walled for work in close quarters and have chrome plated finish.

(TURN TO PAGE 108, PLEASE)



**SNAP-ON TOOLS CORPORATION**  
8026-L 28th AVE. KENOSHA, WIS.

for greatest  
overall economy

**WAUKESHA  
ENGINES**

DIESEL • GASOLINE  
NATURAL GAS • LP GAS

Manufacturers of:

- TRAILER JOCKEYS • FIFTH WHEEL CRANES • MOBILE MACHINE SHOPS • SPLIT-SHAFT POWER TAKEOFFS • HYDRAULIC DOCK RAMPS



**CEMCO INDUSTRIES, Inc.**  
GALION, OHIO

again, gleaming new **HIGHS** for  
*the Crown Jewels of Ignition*

The greatest year in Filko's crown jewel history sees the attainment of new highs for every facet of the crown . . .

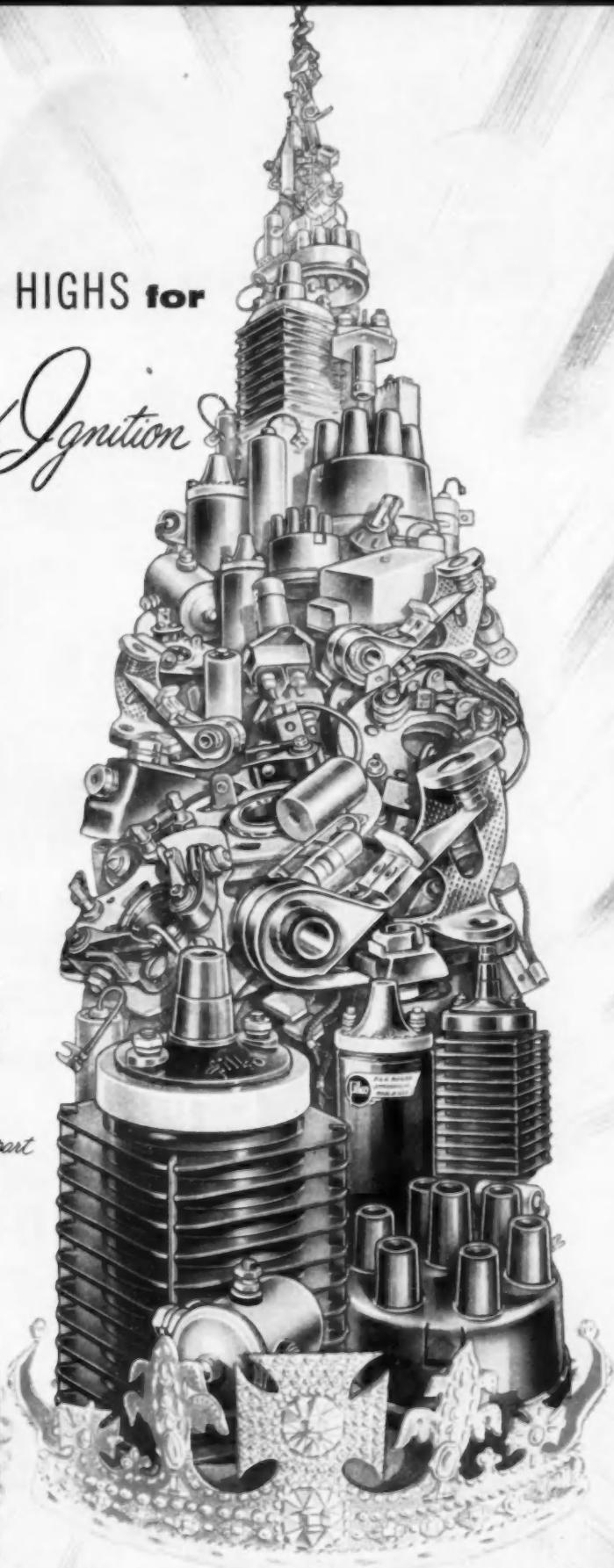
- a new high in users of Filko ignition
- a new high in total sales volume
- a new high in creative design
- a new high in application coverage
- a new high in world wide availability
- a new high in franchised jobbers
- a new high in precision craftsmanship
- a new high in institutional prestige

Each new high gives further evidence of Filko's leadership in the design, production and marketing of improved ignition and the exhilarating appreciation by users of "the Crown Jewels of Ignition."

*more than a replacement part  
... a true improvement  
in ignition*

**FILKO**

F. & B. Mfg. Co.  
4248 W. Chicago Ave.  
Chicago 51, Ill.  
Warehouses in: Los Angeles,  
Oakland, Miami, Fort Worth,  
New York, Boston, Atlanta,  
Cleveland, Lubbock, Little  
Rock, Philadelphia.





Burlington Truck Lines is experimenting with four sets of "doubles" like these between Galesburg and Chicago, Ill. Aim is to speed delivery of

goods. One trailer drops off while the other can be sent on either by itself or with another one without waiting for first to be unloaded.

Increase

**GAS MILEAGE . . . . .**



Reduce

**TRUCK MAINTENANCE**



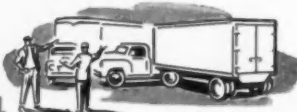
Lengthen

**TIRE LIFE . . . . .**



Guard against

**ACCIDENTS .**



by Equipping Your  
Fleet with  
**HANDY  
GOVERNORS**



**KING-SEELY CORPORATION**

ANN ARBOR, MICHIGAN

WORLD'S LARGEST MANUFACTURERS OF AUTOMOTIVE GOVERNORS

7624

## New Products

Continued from Page 106

### P39. Valve Tool

Herbrand Tools, Fremont, Ohio, announces a new universal hydraulic valve lifter remover. This remover operates on a straight line pull to eliminate twisting, turning, prying, and other possible damage to the lifters. It removes lifters from the top of the engine. An inverted collet locks in a snap-ring groove for a straight line pull.

### P40. Gear Lubricant

Lubrication Engineers, Inc., Fort Worth, Texas, is making two new universal gear lubricants. Its LE No. 505 is an SAE 90 lube and its LE No. 506 is an SAE 140 lube. Both have as their base paraffin base blending stocks to which additives have been added designed to eliminate acidic corrosion of gears and bearings.

### P41. Rust Preventive

Octagon Process, Inc., Staten Island, N. Y., has a new rust preventive oil. It is designed to neutralize and remove corrosive attack due to fingerprints and shop soil, give months of protection against rust. Polished metal parts treated with the new "Froil" under humidity box testing have withstood 100 per cent humidity at 120 deg F for over two months without rusting.

### P42. Tubing Cutter

The Imperial Brass Mfg. Co., Chicago, offers a new tube cutter which includes a spare cutting wheel concealed in the recess behind the reamer. Cutter is for use with copper, steel or aluminum tubing from 1/8 to 1 in. O.D. Features include free wheeling ball bearing action, retractable reamer, flare cut-off groove for removing damaged flares with a minimum of waste, and concealed feed mechanism.

### P43. Torque Fluid

D-A Lubricant Co., Inc., Indianapolis, Ind., announces a new Type C torque fluid containing lubricating oil additive. Additive is designed to eliminate seal shrinkage and hardening, control seal swelling. Fluid also contains oxidation inhibitor to reduce sludge and varnish deposit on brakes, pumps, valves and other moving parts of the torque convertor.

(TURN TO PAGE 110, PLEASE)



If you're particular about your costs . . .



be particular about your oil . . .

# USE WOLF'S HEAD

Cost conscious operators rely on WOLF'S HEAD Oil to keep their fleets out of the garage and *rolling* on the road. Richer, tougher, longer-lasting WOLF'S HEAD is the super refinement of nature's finest, most expensive crude oil—Pennsylvania crude. A better oil to start with, WOLF'S HEAD won't thin out, thicken or burn away even under severe temperature conditions. It is scientifically fortified . . . cleans as it lubri-

cates . . . prevents unnecessary wear and protects engines against damage caused by sludge, rusting and corrosive acids.

Give your vehicles in severe heavy duty service the complete protection of *superior* lubrication with WOLF'S HEAD Heavy Duty Oil. It provides a strong, tough film and exceptional detergency . . . prevents unnecessary wear . . . keeps engines smooth running with added power.

Ask about the free WOLF'S HEAD Laboratory Control Plan.  
It helps prolong engine life and cut costs of fleet operation.



*Free!*

"RULES OF THE ROAD" Folder contains complete driving information, traffic rules, speed laws for all states. Give them to your drivers.

WOLF'S HEAD OIL REFINING CO., Inc.  
OIL CITY, PA.  
New York Office: Glendale 27, N. Y.

100% PURE PENNSYLVANIA

- ★ Longer Lasting
- ★ Superior Protection
- ★ Keeps Engines Clean
- ★ Keeps Power High

**WOLF'S HEAD MOTOR OIL AND LUBES**

100% Pure Pennsylvania — Scientifically Fortified  Member, Penna. Grade Crude Oil Association



## Who Carries the Freight?

	Ton-miles (billions)		Per Cent Change, 1955 from 1954	Per Cent of Annual Total	
	1954	1955 <sup>1</sup>		1954	1955
Railway (including mail and express)	556.6	631.3	+13.4	49.5	49.4
Highway (for-hire and private)	214.6	226.2	+ 5.4	19.1	17.7
Inland waterway (including Great Lakes)	173.7	216.5	+24.7	15.5	16.9
Oil pipe lines	179.2	203.2	+13.4	15.9	15.9
Airways (including mail and express)	0.4	0.5	+21.2	2	2
Grand Total	1124.5	1277.8	+13.6	100.0	100.0

<sup>1</sup>—Preliminary estimates. <sup>2</sup>—About 0.04 per cent. Source: Interstate Commerce Commission.

## Who Carries the Passengers?

	Passenger-miles (billions)		Per Cent Change, 1955 from 1954 <sup>2</sup>	Per Cent of Annual Total	
	1954	1955 <sup>1</sup>		1954	1955
Railway	29.5	28.7	- 2.6	4.7	4.3
Highway:					
For-hire	25.6	25.1	- 1.9	4.1	3.8
Private automobile	548.8	585.8	+ 6.8	87.8	88.2
Total	574.4	610.9	+ 6.4	91.9	92.0
Inland waterway (including Great Lakes)	1.7	1.7	+ 2.2	0.3	0.3
Airway (domestic for-hire, pleasure and business flying)	19.6	22.7	+16.2	3.1	3.4
Grand Total	625.1	664.1	+ 6.2	100.0	100.0

<sup>1</sup>—Preliminary estimates. <sup>2</sup>—Percentages computed before rounding. Source: Interstate Commerce Commission.



HERE'S A REAL PACESETTER that is in every truck operator's dream! Lightweight aluminum body that's every bit as sturdy as a comparable all steel body but is 4000 pounds lighter (11,100 pounds as against 15,100) . . . 4000 pounds less body weight converted into 4000 more pounds of coal, lime, sand, gravel, asphalt, cinders, fertilizer or bulk grain! Profitable? Just look! . . . Multiply the additional 4000 pounds per load by the number of daily trips and you begin to see what a Penn Aluminum Body means to your profit picture. Gasoline consumption and tire wear are reduced by the lighter body weight, too.

**Penn's Front Mounted Telescopic Hoists are the product of 23 years' experience.**

*Safer-Lighter-Efficient-Economical*

The single hoist requires fewer parts and less maintenance. It places more weight on the tractor axle and less on the trailer chassis axle. 95% safer—its greater stability is obtained by eliminating body overhang and lifting the load from the front.

**HAUL MORE— MORE PROFITABLY IN PENN**

**PENN BODY DIVISION**

**HOCKENSMITH CORPORATION**

PENN, PA. Call: Jeannette, Pa., LAfayette 3-5401 . . . Pittsburgh, Electric 1-1242

## New Products

Continued from Page 108

### P44. Diesel Filter

Refill Filter Co., Newark, N. J., announces its Model No. 59C "Deez-Ol-Pure" replacement filter for diesel engines. It contains a porous, cellular filtering medium to absorb oil contaminants caused by normal engine combustion to the crankcase oil, yet not affect or remove the special additive compounds. Cartridge is a perforated can, 14 3/4 in. high and 7 1/2 in. in dia. with a centerpost oil seal.

### P45. Power Ram

H. K. Porter, Inc., Somerville, Mass., has a new ram with four tons of power to get into hard-to-get-at, cramped work areas. After you have pushed out the area in a difficult spot, it is not necessary to switch rams to finish the job. Simply add attachments as needed, extensions, rubber heads or any other attachment. It has an adapter for use with 3/4-in. threaded tubing, or can be used as it for threadless tubing. 4 1/2 in. high when retracted, with ram travel of 3 1/4 in. and an extended height of 8 1/2 in. It fits three and four-ton jacks having 1/4 in. quick detach couplers.

### P46. Two-Way Radio

Motorola, Inc., Chicago, is producing a mobile communications type speaker with a built-in transistor amplifier said to provide up to 10 times the audio output of standard passive speakers. The speaker element has a bandpass frequency response to accent voice frequencies but suppress ignition noise and other interference above and below the basic voice frequency range.

END

Please Resume Reading Page 66

# Du Pont "DULUX" enamel on Pabst trucks reflects "Blue Ribbon" quality



**WORST WEATHER IN THE U.S.A.**—In Du Pont laboratories, the "Accelerated Weatherometer" tests "Dulux" under fading conditions worse than the harshest sunlight—one of the many inspections that insure "Dulux" durability on famous fleets.



**DULUX<sup>®</sup>**  
enamel

BETTER THINGS FOR BETTER LIVING... THROUGH CHEMISTRY

Knowing that their 1000-unit fleet can help sell their famous beer in every part of the country, the Pabst Brewing Company specifies a finish that will stay smart-looking under all weather and road conditions. Pabst Fleet Superintendents from Los Angeles to Newark will tell you why their choice for this demanding service is "Dulux" Enamel.

They feel that "Dulux" has no match for durability, color and gloss retention. And they have years of experience with this rugged enamel to back them up.

They know "Dulux" can take harsh sunlight, snow, sleet, dust and dew without fading, because it is highly corrosion-resistant. And they find it holds up through the pounding and vibration of hard commercial service, because it's flexible as well as tough... has built-in resistance to cracking and chipping.

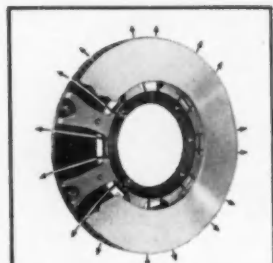
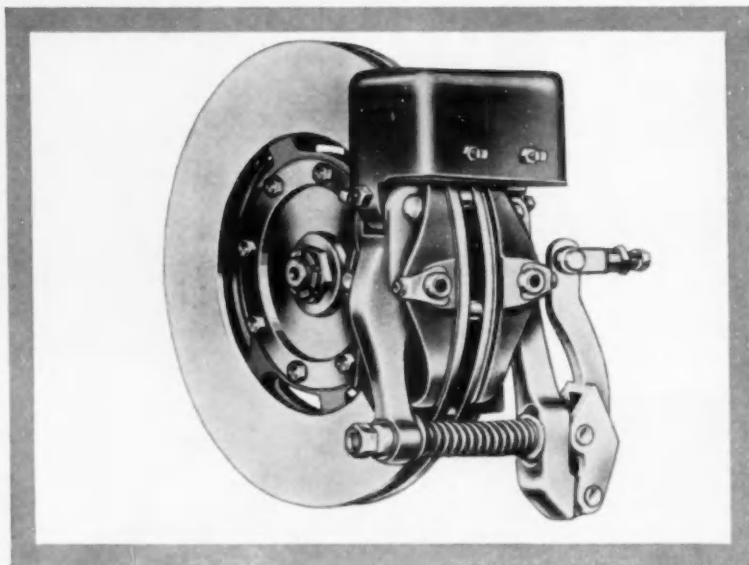
Economical in the shop as well as on the road, "Dulux" flows out smoothly, dries fast, gives a beautiful lasting gloss, job after job.

So for a finish that sells the high quality of your product, take a tip from Pabst Blue Ribbon. Keep your fleet looking its sparkling best with Du Pont "Dulux" Enamel. E. I. du Pont de Nemours & Co. (Inc.), Refinish Sales, Wilmington 98, Delaware.



## It pays to specify Tru-Stop Brakes

**ENGINEERED TO SERVE YOU BETTER—3 WAYS!**



### This is The Difference

One look at a TRU-STOP Brake is enough to know that it will cool itself faster than any other known type of brake.

1. Most of the disc is exposed to the air even during the braking operation.

2. The ventilated design supplies cooling air which circulates between the disc plates.

**1. EMERGENCY •** TRU-STOP BRAKES operate on the propeller shaft. They serve as a complete and independent braking system. They enable the driver to continue on *SAFELY*, in event of service brake failure.

**2. PARKING •** Interstate Commerce Commission reports consistently show that the majority of parking brake accidents are due to insufficient braking capacity. Such accidents can not happen to a vehicle equipped with TRU-STOP Brakes.

**3. AUXILIARY •** Most drivers occasionally use the hand brake to help the service brake. TRU-STOP Brakes have the surplus braking capacity to be used in this way—repeatedly.

*Specify TRU-STOPs for factory installation on the next vehicle you buy. Send for your copy of this booklet.*

**ACCO**



**Automotive and Aircraft Division  
AMERICAN CHAIN & CABLE**

601 Stephenson Bldg., Detroit 2  
2216 South Garfield Ave., Los Angeles 22 • Bridgeport 2, Conn.



## Bus Becomes Salt Shaker

Continued from Page 70

opening in the front of the bus, throwing a spray about 12 ft wide. This fan is powered by a third hydraulic motor.

The hydraulic system is powered by a pump mounted at the front right of the main engine. Both pressure and return lines are carried along the inside roof of the bus in iron pipes.

Biggest advantage of the bus-type spreaders over the old-fashioned spreader truck include one man operation, complete weather protection for the operator inside the heated bus and considerably higher speeds.

### Fleet Designed

Superintendent of Equipment W. E. Williamson reports that the spreaders can operate at 15 mph. He also reports on extensive tests with regard to the controversial problem of salt versus treated cinders. Results indicate that salt properly spread, as is the case with the new equipment, does a much better job.

All of the equipment was designed and installed at Public Service's own central shops. The specialized hopper and conveyor systems were built to Public Service specifications by the Baughman Mfg. Co. at Jerseyville, Ill.

END

Please Resume Reading Page 72

### Adds 1000 lb. payload

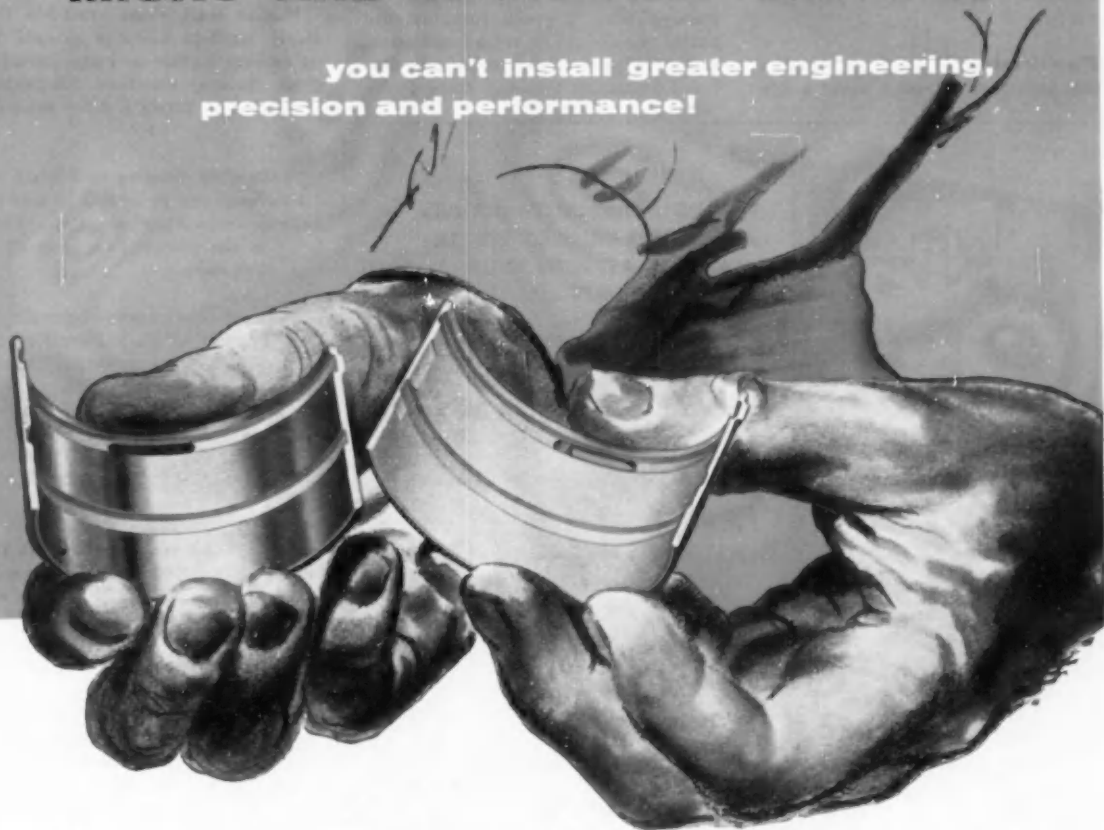


Capitol Tank Line, Inc. operates this new Model No. 800 Fruehauf tank truck and trailer combination between Los Angeles, San Francisco, El Centro and San Diego, Cal. Rig is of light weight "frame-weld" construction, permits an added 1000 lb of payload within California's weight limits. Capacity by gallons is 8625 for commercial gasoline, 9073 for aviation gasoline, 8095 for general fuel.

# Monmouth\*

## MICRO\* AND CLEVITE\* 77 BEARINGS...

you can't install greater engineering,  
precision and performance!



Monmouth bearing qualities can back up your desire to provide the finest of engine repair service. Why? Because they are the product of the world's leading manufacturer of automotive engine bearings . . . and you benefit by the most advanced bearing engineering and

bearing manufacturing techniques known today.

You can quickly get Monmouth Micro or Clevite 77 bearings that are precisely right for any car, truck, bus or tractor. Available from N.A.P.A. jobbers coast to coast.

\*The words Monmouth, Clevite and Micro are registered trade marks of Clevite Corporation

# Monmouth

TRADE MARK

## ENGINE BEARINGS

Clevite Service  
The Cleveland Graphite Bronze Co.  
Division of Clevite Corporation, Cleveland, Ohio, U. S. A.



*Your  
NAPA Jobber  
is a Good Man  
to Know!*



## Manufacturers' Literature

(See page 50 for Fleetman's Library)

**Terminals and connectors**—solderless variety—for electrical wiring are described in this new catalog from Electric Terminals Corp. Circle L 4 on the postcard on page 52 for your free copy.

**Flaw location in castings** (engine block, axle housing, etc.) using a dye

penetrant is covered in this new folder from Turco Products, Inc. You can get a copy by circling L 5.

**Construction truck selection** is main topic in this new booklet from Ford Motor Co. It tells how to match the truck to the construction job. Circle L 6 on the postcard for your free copy.

**Cooling system filters** designed to remove rust, prevent rust, remove scale, prevent scale, retard corrosion, retard electrolytic corrosion are featured in a new catalog from Perry

**Filter Division, R. M. Hollingshead Corp.** Circle L 7 on the postcard on page 52 for a copy.

**Trailer washer**—truck-mounted type—is described in this folder from Lawrence Liekweg Corp. Pictures show it in use at Motor Cargo, Inc. For your free copy of the folder, circle L 8 on the postcard.

**Muffler wall chart** available from Merit Mufflers includes several tips on cutting muffler and pipe installing time. Several excellent illustrations are included. Circle L 9 for your free copy.

**Brake shoe cleaning with blast barrel technique** is described in this new bulletin from Pangborn Corp. Circle L 10 on the postcard on page 52 for your free copy.

**Lighting requirements** becoming effective Jan. 1, 1957, in New York are presented in two new publications. One from R. E. Dietz Co. and the other from Signal-Stat Corp. Both publications also illustrate available equipment. For copies of these bulletins, circle L 11 and L 12 on the postcard.

**Ice and snow melting material**, said to be chloride-free and trade marked "Ice Rem-CF", is described in this new bulletin from Speco, Inc. Circle L 13 on the postcard for your free copy.

**Two leading shoe vehicle brake** in air, vacuum or hydraulic models (with or without mechanical link for parking brake) offered by Fawick Corp. are covered in a new technical bulletin you can get by circling L 14 on the postcard on page 52.

**Piggy-back possibilities and trailers** are discussed by Fruehauf Trailer Co. in this brief brochure. For your free copy, circle L 15.

**One-man cab truck** is announced by White. Called the "Util-I-Deck", it is basically a flatbed truck body designed by Mayer-Pollock plus a 3000 chassis. Circle L 16 on the postcard for details.

**Tandem suspension** featuring non-lubricated equalizer bearing and bonded rubber torque rod bushings is described in this 4-page folder from Hutchens & Son Metal Products, Inc. For your free copy, circle L 17 on the postcard on page 52.

END

Please Resume Reading Page 52



**THE HIGHEST QUALITY THRUST-ABSORBING TAPERED ROLLER BEARINGS AT BOTH ENDS OF CRANKSHAFT . . .**



**. . . FINEST FORGED STEEL CONNECTING ROD, UNIQUE IN THIS SIZE ENGINE . . .**



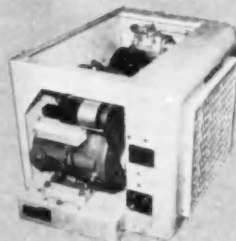
**. . . POSITIVE LUBRICATION SYSTEM THAT NEEDS LESS WATCHING . . .**



**. . . STELLITE EXHAUST VALVE AND VALVE SEAT INSERT WITH A POSITIVE-TYPE VALVE ROTATOR ASSURING LONG VALVE LIFE . . .**



**. . . PLUS A WISCONSIN AUTOMATIC CENTRIFUGAL CLUTCH AND ELECTRIC STARTER . . .**



*...all are reasons why a*  
**Model AEN 8.25 hp.**

## WISCONSIN ENGINE

delivers continuous long-term dependability, maintaining proper temperatures in Thermo King Truck Refrigeration Units built by Thermo King Corp., Minneapolis, Minnesota.

**WISCONSIN MOTOR CORPORATION**

MILWAUKEE 46, WISCONSIN  
World's largest builder of heavy-duty air-cooled engines



ZENITH EXPERIENCE IS IN TUNE  
WITH TODAY'S CARBURETOR PROBLEMS



HAS MORE EXPERIENCE IN  
MORE FIELDS WITH MORE ENGINE TYPES THAN ANY  
OTHER CARBURETOR MANUFACTURER

ZENITH CARBURETOR DIVISION OF

696 Hart Avenue, Detroit 14, Michigan

Export Sales: Bendix International Division, 205 East 42nd St., New York 17, N.Y.



# IRS Announces Use-Tax Schedule

**ANNOUNCED LATE** last month were instructions, definitions and schedule of tax for the federal highway use tax on commercial vehicles.

Yet to come at press time were the complete regulations on who pays how much tax. Here's the presently available regulations.

## Instructions

**Who must file.**—This return must be filed by the person in whose name any highway motor vehicle is or is required to be registered under the laws of any State or Territory of the United States, including the District of Columbia, at the time of the first taxable use of the vehicle in the tax year.

**When to file.**—This return must be filed by January 31, 1957.

**Where to file.**—The return for a person other than a corporation shall be filed with the District Director for the internal revenue district in which the principal place of business or legal residence is located. The return for a corporation shall be filed with the District Director for the internal revenue district in which the principal place of business or principal office or agency of the corporation is located. Persons not having a principal place of business, legal residence or principal office or agency in any internal revenue district shall file their returns with the District Director of Internal Revenue, Baltimore 2, Maryland.

**When to pay.**—The tax shown due on the return must be paid when the return is filed.

**Period covered (Tax Year).**—The tax year begins July 1 and ends the following June 30. The return covers the taxable use of each vehicle for a period beginning with the month in which the vehicle was first used in the tax year through the following June 30.

**Rate of tax.**—Tax is imposed at the rate of \$1.50 per thousand pounds or any fraction thereof on any highway motor vehicle having

a taxable gross weight of more than 26,000 pounds. Where the first taxable use of a vehicle in the tax year occurs after July 31, the tax is prorated according to the number of months remaining in the tax year.

**No provision for refunding.**—The tax is incurred with the first taxable use of a vehicle in the tax year. Should the vehicle later be sold, destroyed or otherwise disposed of, no refund or credit may be allowed for the remaining months in the tax year.

**Exemptions.**—The United States, a State or any political subdivision of a State is exempt from the tax.

Transit-type buses meeting certain conditions may also be exempt.

For detailed information in these cases see Section 4483 of the Internal Revenue Code and the regulations thereunder.

## Definitions

**Taxable use.**—Taxable use occurs when a highway motor vehicle is operated with power derived from its own motor on any roadway in the United States which is not a private roadway.

**Highway motor vehicle.**—The term "highway motor vehicle" means any vehicle which is propelled by its own motor and which is of a type used for highway transportation. Thus the term does not include trailers and semi-trailers or any vehicle of a type not used for highway transportation such as a road grader or a bulldozer.

**Taxable gross weight.**—Although it is the use of the highway motor vehicle which gives rise to the tax, the tax is based on the taxable gross weight of such vehicle. The taxable gross weight of a vehicle is established by regulations which assign a certain weight, as shown below in the USE-TAX SCHEDULE, according to the category in which the vehicle is classified. Any highway motor vehicle which falls in one of the categories shown in the schedule shall be considered to have the taxable gross weight assigned to such category whether or not the vehicle (single unit or combination) is actually loaded to such weight. No tax is due on the use of any vehicle which does not fall in one of the categories shown in the schedule.

**Actual unloaded weight.**—The term "actual unloaded weight" means the empty weight of the vehicle fully equipped for service, without payload or driver.

**Fully equipped for service.**—The term "fully equipped for service" includes body; all accessories; all equipment attached to or carried on the vehicle for use in connection with the movement of the vehicle by means of its own motor or for use in the maintenance of the vehicle; and a full complement of lubricants, fuel, and water. The term does not include equipment attached to or carried on the vehicle for use in handling or transporting cargo, nor does the term include any special equipment (such as an air compressor, crane, specialized oil-field machinery, etc.) mounted on the vehicle for use on construction jobs, in oil-field operations, etc.

## Use-Tax Schedule

Taxable gross weight (pounds)

### Single Units

- A 2 axled truck equipped for use as a single unit with actual unloaded weight of 13,000 pounds or more... 27,000
- B 3 or 4 axled truck equipped for use as a single unit, with actual unloaded weight of at least 13,000 pounds and less than 16,000 pounds... 30,000
- C 3 or 4 axled truck equipped for use as a single unit with actual unloaded weight of 16,000 pounds or more... 40,000

### Combinations

- D 2 axled truck-tractor with actual unloaded weight of at least 5,500 pounds and less than 7,000 pounds... 30,000
- E 2 axled truck-tractor with actual unloaded weight of at least 7,000 pounds and less than 9,500 pounds... 40,000
- F 2 axled truck-tractor with actual unloaded weight of 9,500 pounds or more... 50,000
- G 2 axled truck with actual unloaded weight of at least 9,000 pounds and less than 12,000 pounds and equipped for use in combinations... 40,000
- H 2 axled truck with actual unloaded weight of 12,000 pounds or more and equipped for use in combinations... 55,000
- I 3 or 4 axled truck equipped for use in combinations... 60,000
- J 3 or 4 axled truck-tractor... 60,000
- K Buses—Taxable gross weight is actual unloaded weight of vehicle plus 150 pounds for each unit of seating capacity provided for passengers and driver.

## New!

### MARQUETTE'S EXCLUSIVE

### PUSH-BUTTON

### CHARGER-TESTER DESIGN

### Reduces Battery Service

### Costs **3 WAYS**



The Marquette Series 300 6/12V battery charger-testers introduce new speed, accuracy and simplicity to help cut your battery service costs 3 ways. Here's how:

First, Marquette's exclusive *20-second battery test*; this speed enables your shop to keep a constant check of all rolling stock on busy work schedules... anticipating possible battery problems before occurrence.

Second, Marquette's exclusive *minutes-of-charge* shows the exact time required to restore battery's normal condition. This precision eliminates guess work, error and possible damage during charging cycles.

Third, Marquette's exclusive automated *Push-Button Chargers* bring the ultimate in simplicity to battery service... Now anyone who can push a button can test and charge batteries quickly, safely and easily.

Marquette also protects you with nationally known component parts, a full year performance guarantee and 76 service depots throughout the country.

**YOUR NEAREST MARQUETTE JOBBER** is the man to see. Ask him today about Marquette's Push-Button automated battery service.

## MARQUETTE

### MARQUETTE MANUFACTURING CO., INC.

Dept. 6-124 • 307 E. Hennepin Avenue  
Minneapolis 14, Minnesota



*Impressive economies...remarkable performance!* That sums up why Strickland Transportation Co., Inc., a leading Southwest trucker with routes west to the Rockies and east to the Atlantic, is solidly sold on the superiority of its 32 new Macks—four of which are shown above.

**Their new Macks are averaging**

## **better than 7 miles per gallon for Strickland Transportation**

That's the convincing demonstration of fuel economy put on by 32 Mack B-61T diesels, each of which has rolled up thousands of miles of profitable operation for this leading trucker.

Equally impressive, there has been no downtime for repairs on any of the 32 units so far.

Commenting on this unbeatable record of service and savings, President L. R. Strickland says, "I'm impressed, not only with the superior road performance of our Macks, but also with their easy handling characteristics, which allow us to pick up and deliver in city traffic. Our drivers are sold on the new tractors, too, and that's important on round trips of over 2,000 miles.

"I have found that Macks mean greater profits for me."

Why wait for breakdowns? Why put up with inferior performance? Find out *now* about the dependability and solid earning power that have boomed the swing to Macks . . . and have entrenched Macks as the No. 1 seller of diesel trucks. Call your Mack representative today. Mack Trucks, Inc., Plainfield, New Jersey. In Canada: Mack Trucks of Canada, Ltd.

**MACK**  
**first name for**  
**TRUCKS**

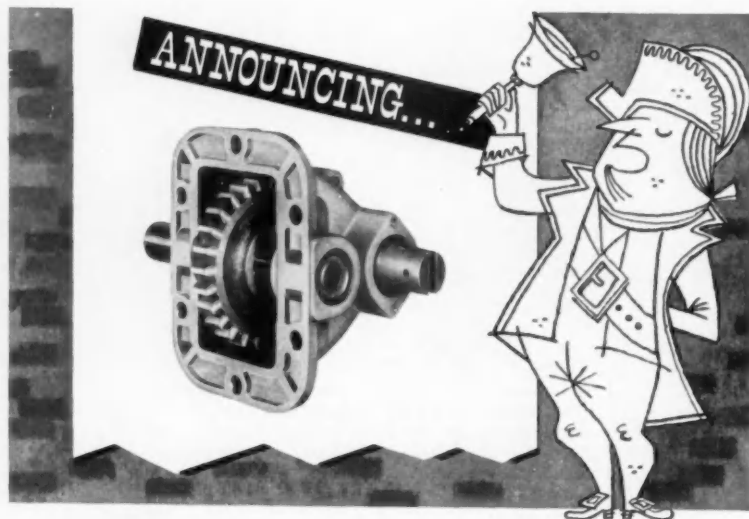
## ... "Do It Yourself" Maintenance

Continued from Page 68

and platform are constructed of salvaged trailer posts, floor plates, angles and pipes. The assembly makes it easy to inspect trailer damage, helps cut claims costs by forestalling over-the-road weather damage to cargo.

### Cargo Net

This latticed cargo net keeps freight intact, dockhands safe when trailer doors are opened at the destination terminal. The web is secured by rubber grommets, cut from old inner tubes.



## NEW SINGLE SPEED ... ALUMINUM HOUSING ... POWER TAKE-OFF

IT'S A TULSA® ... ALWAYS BEST!

Important features that make this new TULSA power take-off outstanding:

- Die-cast aluminum housing ... extremely lightweight
- Output shaft rotates on two needle bearings
- Three output shaft sizes
- Cable or lever control
- Low priced

This new power take-off for all medium duty work offers all the advantages of the complete TULSA line—highest quality, nationwide distribution and service.

**Tulsa Winch**  
TULSA, OKLAHOMA DIVISION OF  
VICKERS Inc.

### Spring Rack

This simple rack holds springs safely in the spring shop. Inch-pipe was bent at right angles, fastened at wall and floor with angle-iron members. The hooked chain keeps springs from accidentally falling into the busy aisle, and gives the rack additional support when heavily loaded.

### Tarp Fasteners

Rubber "rope" is used on fastenings for tarpaulin trailer covers. A further example of economy, plus ingenuity, the bands, made from old inner tubes, eliminate time-consuming tying and untying of conventional rope fastenings.

### Control Board

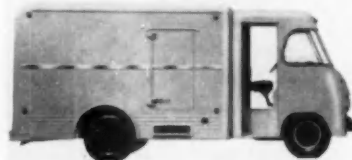
Visual maintenance control records permit maintenance chief Paul Brooks to check periodic inspection schedules at a glance. Golf tees are used to represent each tractor, with different colors indicating the base terminal for each unit. The tees move across the board at 65 miles per hour, winding up with the tractor scheduled into Auburn for its 20,000-mile servicing. A similar board is used for trailers.

From unit parts repair to major overhauls, from truck to terminal, shipper to consignee, Red Star's continual maintenance offensive pays dividends—in increased employee safety, added cargo protection, operational economies and better fleet service.

END

Please Resume Reading Page 69

### "Kurb-Hi" Walk In



Herman Body Co., St. Louis, Mo., announces its new "Kurb-Hi" cab, a low step, walk-in unit. It mounts on any stripped forward-control chassis with GVW of 12,500 lb or more. Short cab length permits shorter wheelbase.



# SAVE 70%

## AND HAVE BETTER LOOKING TRUCKS

TIME IS MONEY . . .

and it's down-right uneconomical no matter how you look at it to wash your trucks with hose-and-bucket.

Choldun's push-button TRUCK-WASHERS — in sizes from 20' to 48' long — not only take the "fight" out of this job . . . but also save up to 70% in time per each wash job.

Overhead installation of the spray-and-shampoo elevator keeps your wash bay free and unobstructed at all times. No tracks on the floor.

Available for approximately \$2-a-day through the Commercial Credit Plan and your local equipment jobber who will install your truckwasher.

. . . NEW CATALOG

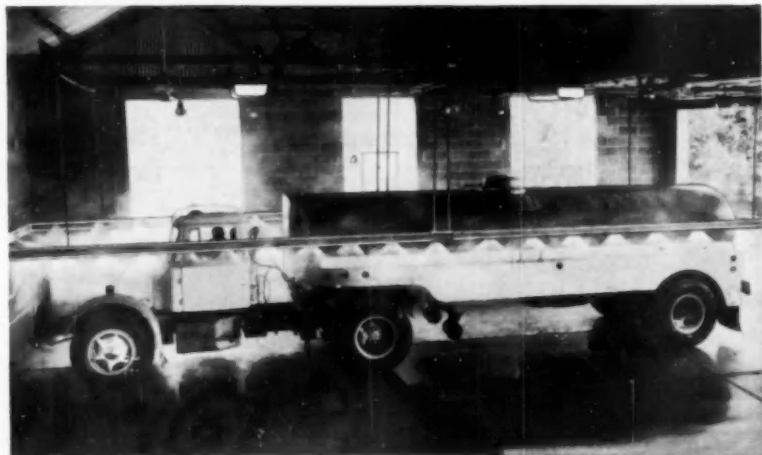
JUST OFF THE PRESS.

Drop us a postal card for your **FREE** copy plus other descriptive material. Address:

# Choldun

MANUFACTURING CORPORATION

331 EAST STREET, NEW HAVEN, CONN.





# New Jeep Has Forward Control

Continued from Page 82

The 4-wheel drive makes the unit suitable for rugged off-the-road service over all types of terrain, while for normal highway operation the vehicle shifts easily into conventional drive.

The FC-150 offers nine forward and three reverse power combina-

tions. The change from conventional to 4-wheel drive is readily made by shifting the single floor-mounted transfer case control lever to meet varying driving requirements without stopping the vehicle.

An optional 4-speed transmis-

sion, available at extra cost, provides 12 forward power combinations.

The 16-gal fuel tank and spare tire are mounted in easily accessible but out-of-the-way positions at the sides of the cargo box where they are protected from damage.

With a ground-hugging low center of gravity, the payload bed is only 24 in. from the ground for convenient loading.

A large, roomy interior is a feature of the "safety-view" cab, which provides up-front visibility which is claimed to be 200 per cent greater than in conventional vehicles. The high, wide wrap-around windshield is almost 1200 sq in. in area. A broad rear window of 628 sq in. and optional rear quarter windows provide quick all-direction visibility.

Other cab features include suspended brake and clutch pedals, fully adjustable driver seat, and a console-type instrument panel. An innovation is the placement of the brake fluid tank access cover on the instrument panel for ease of checking and filling.

Additional features in the deluxe cab model include acoustical trim panels on doors and headlining, foam rubber seats, and rear quarter windows in addition to standard equipment.

END

Please Resume Reading Page 85

Just Yell "Help"



Displayed for the first time at the American Public Works Assn. annual convention in Fort Worth, Texas, late last month was this emergency rescue truck. Designed by General Motors for civil defense and other disaster work, it holds eight persons plus some 150 pieces of emergency equipment. Features include 4-wheel drive, 6000-lb capacity front winch, 130-hp 6-cyl engine, "helper" springs, built-in equipment containers, roof rack and optional "HydraMatic" automatic transmission.



use only  
**FACTORY NEW  
GENUINE  
BENDIX DRIVES  
and  
PARTS!**



Repeat business is the foundation on which service profits are built. One of the surest ways to keep customers coming back time and time again is to use only genuine parts in your repair work. When you service Bendix® Drives, be sure to use only *factory new* Bendix Drives and Parts. Your customers will get the same dependable performance built into every original Bendix Drive—performance proven by over 100,000,000 installations. Insist on *factory new* Bendix Drives and Parts when you order from your distributor.

\*REG. U.S. PAT. OFF.

## Bendix Drive

ECLIPSE MACHINE DIVISION of  
ELMIRA, NEW YORK

Export Sales: Bendix International Division, 205 East 42nd St., New York 17, New York

**Bendix**  
AVIATION CORPORATION



Mr. T. J. Legare (above, left), Terminal Manager of the Anchor Motor Freight Corp. of Framingham, Mass., chats about maintenance with Curtis S. Collins, Gulf Sales Representative.



## **"I wanted one fine grease to do everything—and I found Gulflex 'A'!"**

"I was sick and tired of cluttering up the place with grease cans," says Mr. T. J. Legare of Anchor Motor Freight. "So, when I heard about Gulflex 'A' I decided to try it. I wanted one fine grease to do *everything*."

"I found it all right. And it's the best—*without question!* This Gulflex 'A' saves on space. It reduces waste and reduces lubrication costs. It saves on equipment and most important of all it saves *time*. And that's a really big thing in our business, believe me!"

### **Some outstanding features**

Gulflex "A," the multi-purpose LITHIUM BASE lubricant, is ideal for chassis, water pump, springs, universal joints and wheel bearings. It resists the action of water and delivers outstanding performance at both high and low temperatures.

Write on your letterhead for literature on this exceptional product, or phone your nearest Gulf office (it's in the phone book) and ask to have a Gulf Sales Representative call.

**The finest petroleum products for your every need**  
**GULF OIL CORPORATION • GULF REFINING COMPANY**  
 1822 Gulf Building, Pittsburgh 30, Pa.



# Reefer Research Pays Dividends

Continued from Page 79

the improvement in floor construction. It used to be that after three or four years of service, the insulation and subfloor would be so deteriorated that they would have to be replaced. The cost of this job averaged around \$1000 per unit. Based on experience to date,

Emery officials expect their modified trailers to last seven or eight years.

## Modified Floors

The reasons for this optimism become clear when you look closely at what was done to the floor.

## Now! A COMPLETE TOOL DEPARTMENT FOR AUTOMATIC TRANSMISSION SERVICE!



Here's a quick way to modernize your shop. You can have a complete automatic transmission tool department—with every tool you need... with a minimum investment.

This "package" eliminates extra tools that are now required to adjust and repair automatic transmissions. For complete information, contact your Bonney jobber or write direct.



Bonney Forge & Tool Works  
Alliance, Ohio  
Gentlemen:  
Show me how I can set up my complete tool department for servicing automatic transmissions.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

BONNEY FORGE & TOOL WORKS • ALLIANCE, OHIO

The most dramatic improvement, perhaps, is in the subfloor. By replacing galvanized steel with exterior plywood, Emery was able to reduce heat loss through the subfloor by approximately 400 per cent.

Tests conducted by the company prior to trading metal for wood revealed that the standard galvanized steel pan used for reefer subfloors has a heat loss ("K") factor of 407. The 3/8-in. thick sheet of fir plywood now employed has a K factor of 1.05. What this means, points out Thorsland, is that the amount of heat seeping through the plywood is approximately 400 per cent less than that penetrating the galvanized steel pan, even when the latter is in perfect condition.

The plywood panel is similar to that used by many "do-it-yourself" enthusiasts for home remodeling projects. It is covered with a substance, much like that used for automobile undercoats, known as "Nox-Sound." (This same material is used as the binder for the styrofoam insulation.) When the Nox-Sound is applied to both sides of the subfloor panel, it prevents deterioration of the plywood due to moisture.

The big difference between Emery's new and old aluminum floordeck construction is that the new one is watertight. As a result, the subfloor insulation is protected against deterioration from the brine which collects inside the trailer. Formerly, this corrosive mixture would seep through the deck.

## Improved Deck Joints

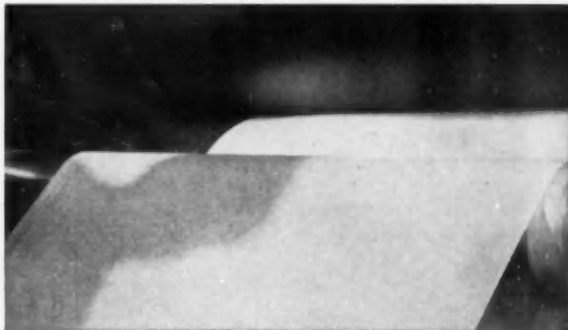
One way it got at the insulation and subfloor pan was by attacking the joints in the floordeck. These joints are formed by the panels making up the deck. Under the former system, the edges of adjoining panels were overlapped, then bolted together. Caulking compound was used to seal the joint. However, the exposed screw heads would corrode. Also, the brine would literally eat through the caulking.

Additional leakage occurred at the nose of the trailer. The flash-  
(TURN TO PAGE 128, PLEASE)

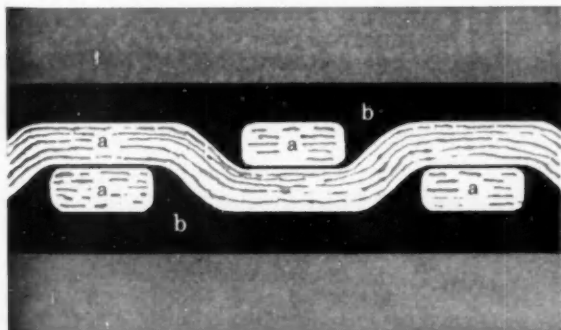
# Du Pont combines rugged nylon with durable neoprene



**STRONG NYLON**, specially woven to produce a thin, flat, basket-weave fabric, is the core of Du Pont's construction of "Fairprene." "Fairprene" won't rot, mildew or shrink, even when stored wet.



**DU PONT'S** special process includes calendaring or coating a durable neoprene to the nylon fabric core. This process thoroughly bonds the neoprene to the nylon.



**CROSS SECTION** shows construction of "Fairprene": (a) Nylon core is thoroughly coated on both sides and bonded to the neoprene. (b) Neoprene coating resists peeling, flex cracking, and weathering.



**RESULTING TARPS** of Du Pont "Fairprene" are lightweight, strong and waterproof. Their smooth finish lets them slide on or off the load without snagging. They are easily handled by one man.

## Result: Light, Strong, Smooth, Waterproof Tarps of Du Pont FAIRPRENE®

An exclusive Du Pont process combines the strength of nylon with the rugged durability of neoprene. The resulting lightweight, but strong, tarps of "Fairprene"® are waterproof and weather-resistant—unaffected by grease, oils and most chemicals. They won't rot, mildew or shrink—stay pliable and strong in freezing or steaming weather. Because of

Du Pont's exclusive process, the neoprene coating resists peeling, flex cracking and abrasion.

Being lighter, tarps of "Fairprene" save money, because they're easier to handle. One man can handle them, and they reduce your dead-weight load. Tarps of "Fairprene" can be repaired right on the job—no special equipment needed.

"Fairprene" is made in various weights for light, medium or heavy-duty service. If you use tarpaulins for any purpose, why not find out about tarps of "Fairprene"? Mail the coupon today for free bulletin with sample swatches. Du Pont manufactures only the coated fabric. The tarpaulins can be made by your usual source.

### DU PONT INDUSTRIAL COATED FABRICS

E. I. du Pont de Nemours & Company (Inc.)  
Fairfield, Conn.



BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY

COMMERCIAL CAR JOURNAL, December, 1956

"Fairprene" is Du Pont's registered trademark for coated fabrics, sheet stocks and cements.

E. I. du Pont de Nemours & Co. (Inc.)  
Fabrics Division—CC-612, Wilmington 98, Delaware

Please send me your bulletin on "Fairprene" for  
tarpaulins and swatches of material available.

Name \_\_\_\_\_ Position \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_



**Keep your air brake system at peak operating efficiency**



# BENDIX REPAIR

**This seal is your guarantee of excellence on factory reconditioned air brake equipment**



This is why Bendix-Westinghouse Factory Reconditioned Units carry the same warranty as brand new units. When old compressors, governors, brake valves and other units are returned to the factory by Bendix-Westinghouse distributors, they are:

- 1** Completely disassembled by experienced workers.
- 2** All of the following parts are scrapped and replaced with brand new material:

- a. Rubber parts, gaskets and other parts that deteriorate with time.
- b. Worn parts that cannot be reconditioned to an oversize or undersize and maintain their original performance characteristics.
- c. Parts that are broken or damaged, even though they could be repaired.
- d. Diaphragms, springs and bearing bushings.
- e. Compressor pistons and valves.
- f. Valves and valve seats that cannot be satisfactorily reconditioned.
- g. Parts where later design changes have improved life or performance.
- h. Parts subject to fatigue.

**3** All parts to be used again are thoroughly cleaned, using kolene, degreasing, sand and shell blasting operations.

**4** Following rigid inspection, the parts to be used again are reconditioned, which often involves refinishing to standard .010", .020" and .030" over and under sizes.

**5** All units are assembled and tested in the same manner as new units and are guaranteed to give the same service performance.

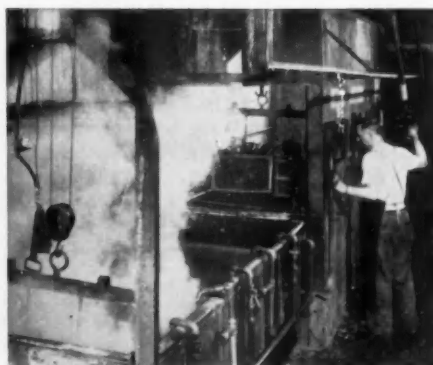
**EVERY DEVICE IS REBUILT TO THE HIGHEST STANDARDS IN THE INDUSTRY**



Hundreds of old and worn air brake units are returned to the factory every day. After preliminary inspection, road grime is removed from units in this pre-cleaning operation.



All units are completely disassembled and examined. Damaged material, as well as parts subject to deterioration with time, are scrapped. Salvageable basic parts are placed in baskets for further processing.



All parts to be used again are thoroughly cleaned by special methods. They include degreasing equipment, sand and shell blasting operations and immersion in steaming vats containing kolene cleaning solutions.

**See your authorized Bendix-Westinghouse distributor**



**the easy, dependable, economical way**

# **-WESTINGHOUSE EXCHANGE SERVICE**

Thousands of successful fleet operators and truck owners have used the Bendix-Westinghouse Repair Exchange Service for more than twenty years—and here is why!

**IT'S A MONEY SAVER.** Air brake equipment, either worn out or with impaired efficiency as a result of long service, may be replaced with factory rebuilt units at a minimum flat rate which assures owners of low operating costs per mile.

**IT'S DEPENDABLE.** Rebuilt to exacting factory specifications by skilled workers, Repair Exchange Units carry the same warranty as brand new devices and can be depended upon for the same long service life. All Bendix-Westinghouse Factory Reconditioned Units are rebuilt to include the latest engineering improvements incorporated in brand

new units, thereby offering operators modern, efficient equipment at low cost.

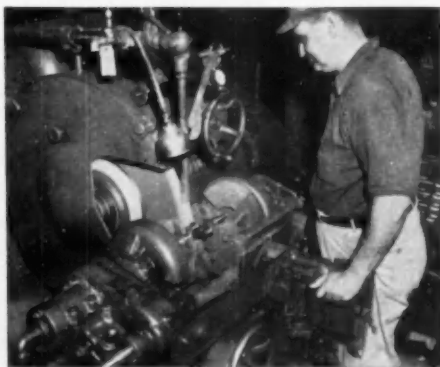
**IT GUARANTEES TOP PERFORMANCE.** Any part that is worn or subject to deterioration or fatigue as a result of long service is replaced with brand new parts in every Factory Reconditioned Unit. All units are assembled and tested in the same manner as new units and maximum performance is guaranteed.

**IT'S CONVENIENT.** Simply call or drive in to your nearest Bendix-Westinghouse distributor and he will replace your worn unit with a Factory Reconditioned Unit from his stock. You will be charged a low flat rate price based on the necessary repairs indicated by inspection of your old unit. You and your distributor can make this inspection and your cost may be determined immediately.

**...AND CARRIES THE SAME WARRANTY AS BRAND NEW UNITS!**



Factory reconditioning of air brake equipment is a production operation. This bank of refinished cylinder blocks indicates the magnitude of only one phase of the Repair Exchange Service.



Experienced machinists regrind compressor crankshafts with the same care used in the manufacture of new equipment. Complex and costly machine tools make it possible to maintain close tolerances required for peak performance.



All cylinder blocks are honed oversize on precision machines. The block is replaced with a new standard size cylinder block if rehoning would exceed specifications limiting wall thickness.



**Bendix-Westinghouse**  
THE WORLD'S MOST TRIED AND TRUSTED **AIR BRAKES**



BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY • General Offices and Factory—Elyria, Ohio • Branches—Berkeley, Calif.; Oklahoma City, Okla.

In place of wasteful and uncertain crankcase-oil changing based upon mileage or hours in service, many fleet operators now use a better guide that saves them both time and money.

## Now you can test used oil in minutes

IT HAS COME as something of a surprise to some maintenance men to discover that they have been throwing away hundreds of gallons of still-good oil . . . year after year. Conversely, it is quite a jolt to realize that a costly engine-repair job could have been prevented by an on-the-spot analysis that would have shown up the condition . . . in minutes!

The recommendations for oil changes issued by engine makers have always been computed on "averages" for the various classes of vehicle service. And like the "average" man on the insurance chart, the average vehicle doesn't exist in the actual fleet. Two trucks or buses of the same make and model, operating on the same job, can have quite different patterns of oil economy and engine condition. Obviously no one set of rules can apply ideally to all units of a fleet. And fortunately there is no longer any need for such generalization.

From a couple of drops of used oil, the Shell "ADC\* Oilprint Analysis" provides a reliable check of oil condition, in minutes. It is very simple, and with a

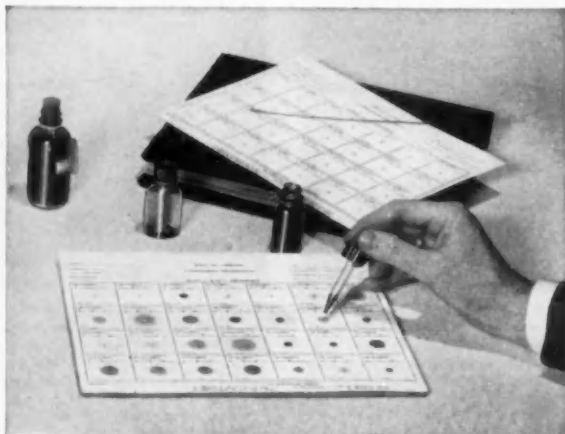
little practice, it tells you a lot about that oil and the engine that uses it.

**What a drop of used oil shows:** You place a drop of used oil on a piece of special filter paper supplied by Shell . . . let it stand a minute or two. You will then be able to see the following:

**Water dilution:** Even a tiny amount of 'water shows up . . . and that means not only that your oil is losing its ability to protect engine parts, but it also shows whether the water represents a normal amount of condensation or something more serious, such as an actual leakage of coolant from a faulty jacket.

**Dispersancy/detergency:** The same oil drop will give you a picture of how well the special additives in the oil are doing their job . . . whether or not the contaminants are being held in suspension where they do least harm . . . whether the cleansing and dispersing actions are adequate . . . whether the oil is still good.

**Adulteration:** The color of the oil spot will show whether too much contamination is occurring . . . and will very often point up the cause, indicating a check on



The simple test setup: sample bottles, a wire rod, a bottle of "indicator," and the permanent record card.



This single, on-the-spot sample reveals many things about an engine.



A fleet superintendent sees how easily the test is made.

injectors, nozzles, oil and air filters of diesels, or on plugs, carburetors and filters of gasoline engines.

All of the above can be learned from the single drop of oil . . . in an amazingly short time.

**Alkalinity:** Engine wear and engine deposits increase as the oil becomes acidic in nature due to contamination from combustion products. A special indicating fluid, developed in Shell Laboratories, tells at a glance whether oil is alkaline and still usable, or acid and how much.

Operators who keep an ADC Oilprint Analysis record of each vehicle generally find that the crankcase oil stands up longer than they had figured . . . a distinct saving in lubrication cost. At the same time, there is a running check on each engine that often detects impending trouble before its correction becomes costly. In this respect, the Shell ADC Oilprint Analysis qualifies definitely as one of the valuable recent tools of preventive maintenance.

If you are concerned with extending the service of crankcase oil, and with avoiding the risk of using oils loaded with contaminants, we suggest that you have one of the Shell service engineers demonstrate ADC Oilprint Analysis for you.

\*Trademark



Photo shows an oil-spot test card...one phase in the visual life record of a charge of oil.

The Shell "indicator" shows acidity instantly. If spot turns red, oil is no longer fit to use, should be changed quickly.



## SHELL OIL COMPANY

50 WEST 50TH STREET, NEW YORK 20, NEW YORK  
100 BUSH STREET, SAN FRANCISCO 6, CALIFORNIA



## Reefer Research Pays

Continued from Page 122

ing at this point was formerly bolted to the floor deck. Here again, exposed screws were used, which gradually corroded and opened a leak path. At the rear of the trailer, meanwhile, moisture would get in between the floordeck and its supporting sill, which was made of wood.

Here's how Emery solved these problems:

First, a new type of interlocking joint was developed to tie the floordeck panels together. This joint provides much better protection against corrosion; also, it permits screw heads to be buried.

### Welded Flashing

The method used to attach the flashing at the nose of the trailer to the floordeck was also changed.

Instead of being bolted, the flashing is now welded. At the rear of the trailer, a metal sill has replaced the wood unit, and the floordeck is welded to it.

### Reefer Test

Emery's success in reducing heat losses through the meat rail is indicated by a recent test the company performed on two reefers.

One had the conventional meat rail construction. This consists, basically, of metal rails running from front to back of the box, which are attached to metal cross-beams with metal clips. The cross-beams, spaced every 36 in., are held up by vertical metal supports built into the sidewalls of the reefer unit. At the point where beams and vertical supports connect, there is direct contact with the metal skin of the trailer.

### Oak Cross Beam

The other trailer had a similarly-designed meat rail installation. Only difference was the innovation worked out by Emery officials—a cross-beam made of oak instead of metal.

Identical electric heaters were placed inside each reefer unit for 24 hours, and thermocouples were attached to the interior and exterior surfaces of the two boxes. In the unit which had conventional meat rail construction, the average inside temperature was seven degrees lower than in the unit with the wood cross-beams. Meanwhile, temperature on the outside skin of the conventional unit reached a maximum of 92 degrees, while that on the outside of the other trailer was only 83 degrees.

### Stays Cold

What this means, in effect, says Thorsland, is that a wood cross-beam sharply reduces heat conduction. As a result, costs of keeping a loaded refrigerated trailer on the road can be cut, and more important, the chance of spoilage is sharply reduced.

END

Please Resume Reading Page 80

## NOW HANDLE TRUCK TIRES QUICKLY AND EASILY . . .



with  
*Branick's*  
new

### HEAVY DUTY EF-ERT-LESS TIRE SPREADER

BUILT TO SPREAD  
THE HEAVY PLY  
AND WIRE CORD  
TIRES FOR FAST  
VISUAL INSPECTION

#### POWERFUL

Handles tires up thru 14.00-24" 20 ply. Easily spreads all tires with wire cord construction.

#### SAVES TIME

Lifts, clutches and spreads the heavier tires for inspection and repair in the time it would take to remove a valve cap.

#### SAVES LABOR

Heavy tires handled as easily as passenger tires. Heavy Duty tire lift raises tire to spreader arms by air valve control. These valves and your air line do all the work.

MADE  
EASY

INSTALLING & REMOVING  
INSIDE CURING RIMS • AIR BAGS • TUBES • FLAPS  
INSPECTION & REPAIR

## BRANICK MANUFACTURING CO., INC.

WORLD'S LARGEST MANUFACTURER OF TIRE HANDLING EQUIPMENT

FARGO, N. D.

CABLE: BRANICK USA

In Canada write for the name of your nearest jobber. All exports write:  
Branick Mfg. Export Co., 82 Beaver St., New York, N. Y.  
Eastern Sales Office: 227 West Exchange St., Akron, Ohio.

#### CONVENIENCE

Power from larger spread cylinder gives wider spread for greater clearance installing inside curing rims, air bags, flaps, tubes. Entire casing is spread wide open, free to revolve while spread.

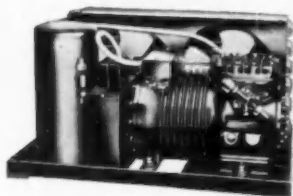
#### RUGGED

Strong welded steel construction, made to take heavy duty use.

#### WELL LIGHTED

Two sealed beam lamps give perfect vision inside and outside of casing.

getting  
there is  
only half  
the job!



#### CAPACITY

Choose from  $\frac{1}{2}$  to 3 H.P. in Copeland hermetic, the direct-drive accessible hermetic, and economical belt-driven models. Model TR-100 shown.

#### DEPENDABILITY

Thousands of Copeland units now in use have given years of trouble-free, over-the-road service—proof of superior engineering, ruggedness and dependability.



#### AVAILABILITY



Our unexcelled coast-to-coast network of 130 wholesalers and over 25,000 refrigeration dealers means the best in service when you need it. It's only a phone call away.

Copeland refrigeration does the rest . . . keeps food fresh!

The old-fashioned dairy maid got there all right . . . but her milk and butter wouldn't satisfy *modern* demands for down-on-the-farm freshness and flavor. Today, truck fleets equipped with dependable Copeland units protect in-transit payloads from spoilage and flavor loss.

Whatever the application—holdover or over-the-road—a Copeland unit meets the critical needs of multi-stop deliveries and long distance hauling. Plugged in at stops, or run from a generator for over-the-road use, a Copeland unit produces cooling you can count on all the way . . . at lowest cost per mile.

SINCE 1918

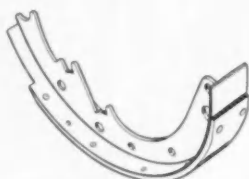
**Copeland**  
REFRIGERATION

WRITE FOR SPECIFICATIONS  
AND PERFORMANCE DATA

CORPORATION, Sidney, Ohio



# STOP with



**DELCO LINED BRAKE SHOES**  
Made and assembled to original equipment specifications.



**WHEEL CYLINDER REPAIR KIT**  
All parts necessary to put wheel cylinder in normal operating condition.



**MASTER CYLINDER REPAIR KIT**  
All parts needed to put master cylinder in normal operating condition.

Delco Super 11 brake fluid improved with HTD—original equipment in General Motors cars and trucks—is efficient at 50° higher temperatures, improves braking at all temperatures, under all operating conditions. Chemically stable, compatible with the rubber and metal parts in the brake system—and with greater resistance to corrosion and evaporation—Delco Super 11 *exceeds* the S. A. E. and government specifications for heavy-duty hydraulic brake fluid. Do yourself a favor—order Delco Super 11 improved with HTD *today!* Packed in convenient containers, from pint cans to 54-gallon drums. Available everywhere through the United Motors System or your General Motors car or truck dealer.

General Motors Values from



## Moraine Products

Division of General Motors, Dayton, Ohio

# GO with



**MORaine-400 BEARINGS—**  
toughest automotive engine bearings  
ever made.



**M-100 BEARINGS—**  
excellent fatigue resistance and longer  
life expectancy.



**MORaine BI-METAL BEARINGS—**  
precision built to original equipment  
specifications.

A complete line of Moraine Service bearings for all cars and trucks. The new, complete Moraine bearing line gives you the bearings you need for all bearing replacement jobs—conveniently available from a single source. Remember—Moraine bearings are original equipment in General Motors cars and trucks. So—replace with Moraine in General Motors applications; sell and use Moraine bearings for other bearing replacement jobs. Moraine service bearings are available everywhere through the United Motors System or your General Motors car or truck dealer.



#### MORaine GAS FILTERS!

Glass-bowl and pancake all-metal types assure dirt free, lint free fuel under all operating conditions.

General Motors Values from



## Moraine Products

Division of General Motors, Dayton, Ohio

# NOW... meet PRESCRIBED AUTOMOTIVE TORQUES with an IMPACTOOL

FAST!  
EASY!  
SURE!

Size 5UT Electric Impacttool with Torque Control



with a rugged, adjustable, steel TORSION BAR

- **SIMPLE TORQUE SETTING**—torsion bar adjusting sleeve is clearly calibrated for changing torque with easy-to-use torque jig.
- **SETTING REMAINS CONSTANT**—until the adjustment is changed.
- **ELIMINATES "OVER-TORQUE"**—the torsion bar *automatically* shuts off the tool when preset torque is reached.
- **REVERSIBLE**—full power in reverse.
- **REMOVABLE TORSION BAR**—quickly converts to a standard Impacttool.
- **NO CLUTCH**—to wear, slip or require adjustments.

18-337

Ask your Ingersoll-Rand jobber now for a free demonstration of this amazing Impacttool in your shop!

## Ingersoll-Rand

11 Broadway, New York 4, N. Y.



Originators of Impacttools

AIR & ELECTRIC

## Mechanic Shortage

Continued from Page 77

visibility and vulnerability to accidents, as well as increased maintenance cost.

### For Example . . .

Citing some examples of how poor design increases maintenance cost, Neumann mentioned one 5000-lb truck which, when it is necessary to change the dual rear tires, requires the use of a 12-lb sledge in an awkward position under the truck because of close tolerances between the wheel and the hub. This, he pointed out, is not only time-consuming and aggravating, but a waste of energy. In some cases wheels have been ruined through this procedure, he said.

He cited as another example a delivery truck which requires jacking up the body as well as the axle in order to gain sufficient clearance around the rear fender to make an otherwise simple tire change.

Neumann recommended that designers consider uniformity and standardization of wheel and rim width as a means of helping the fleet operator to reduce maintenance costs. He pointed out that wheel and rim widths have changed many times and that he now has three different rim widths for tires of several sizes.

Other examples which he cited:

- On many older model trucks manufacturers have installed grease fittings on the top instead of the bottom of drag-link, ball and socket joints, thereby unnecessarily wasting the time of lubrication men.
- The exhaust tail pipe on a certain make of tractor is pointed toward the left rear wheel causing the fumes to strike the braking mechanism. Since the exhaust fumes are often laden with moisture, this sometimes causes the braking mechanism to freeze up.
- In order to remove and replace the power-steering pump belt on some model vehicles, it is first necessary to remove the lower radiator hose and all that that entails. This is especially troublesome when anti-freeze is used.

• In order to change oil in another vehicle, the entire cab had to be tilted forward. This not only consumed time on the part of the gasser, but it aggravated the driver, since all his personal belongings left in the cab had to be re-arranged daily. On one occasion, the driver relied entirely on the electric gage which gave a false reading and consequently caused serious damage to the engine. This difficulty was later corrected by cutting a hole through the engine cover hood and installing a removable cover through which the gasser is now able to check the oil.

### Bus Design

Bus men have similar problems according to G. E. Heiber. He suggested that some of the important and wearing components of the engine could be divorced from the engine itself, operated possibly by remote control, but with the main purpose being accessibility. He pointed out that this would mean that the main engine could be sandwiched into a smaller space, said: "We can anticipate main engine repairs planned on mileage oil consumption and gradual deterioration through wear. It is the breakdown of components that cannot be anticipated; breakdowns that ordinarily are not based on mileage are the real headache of the maintenance man."

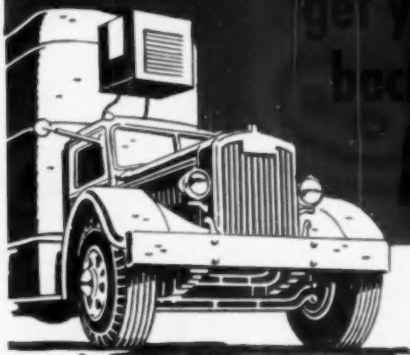
Commenting critically on liquid-cooled engines, Heiber said: "You have only to add a few more water hoses, elbows, gaskets, and so on, and the maintenance department will be forced to add a master plumber and a plumber's helper to the staff."

### Not to Mention . . .

Heiber listed carburetors as one of the trouble spots in modern bus engines, called for them to be built to withstand greater abuse. He thought better mufflers should be designed and he suggested the use of sealed brakes to eliminate the troubles caused by mud and foreign material. He asked for separate tires, front and rear, designed to do the job each set of wheels is called upon to do. Mileage varies so much, he said, between

(TURN TO PAGE 136, PLEASE)

## IR AIR IMPACTTOOLS



get your trucks  
back on the road  
**FASTER!**

Are your trucks tied up too long in the service shop? Want to get them back on the highway earning money for you sooner? Put these fast, rugged Ingersoll-Rand Air Impacttools in the hands of your service mechanics.

What a difference from hand tool servicing! And even if you now use outmoded power tools, these improved, modern Air Impacttools will cut your truck service time and costs substantially.

Compare the rest . . . then invest in the best!



Size 403  
AIR IMPACTTOOL



Size 310  
AIR IMPACTTOOL



Size 334  
AIR IMPACTTOOL

• Mail this coupon for your "Truck Service Guide" . . . 32 pages of illustrated case histories showing how you can save money on truck and bus repair jobs . . . and how much you can save!

# Ingersoll-Rand

Ingersoll-Rand, 11 Broadway, New York 4, N. Y.

Please send me my "Truck Service Guide", I'm interested in cutting down service costs.

NAME.....

COMPANY.....

ADDRESS.....

CITY.....ZONE.....STATE.....



# The Big Fleets Go Ford

**Burlington Truck Lines has  
used Fords since 1938.  
Their latest purchase of 125  
new C-600's and C-750's  
brings their fleet total  
to 168 Fords**

Your fleet can profit by using Fords, too. Like the Burlington Truck Lines, you'll find Ford gives you more truck for the money. For example, only Ford gives you modern Short Stroke power in every truck, V-8 or Six, for greater gas and oil economy. Ford's sodium-cooled exhaust valves in Heavy Duty engines run up to 225° cooler for longer valve life.

Ford trucks are built stronger to last longer and a 10½-million truck study







1956 Ford C-750's are used by Burlington on city delivery operations from their terminals throughout their system. These Ford BIG JOBS average 35 pickup and delivery stops every day.

proves it. And there's more comfort and safety with Ford's *Driverized Cab* and exclusive Lifeguard features.

Whatever your job requirements are, you can get the benefits of greater performance and economy by standardizing on Fords in your fleet. For further information contact your local Ford Dealer or write to: Fleet Sales Dept., Ford Division, Ford Motor Co., P. O. Box 658, Dearborn, Michigan.

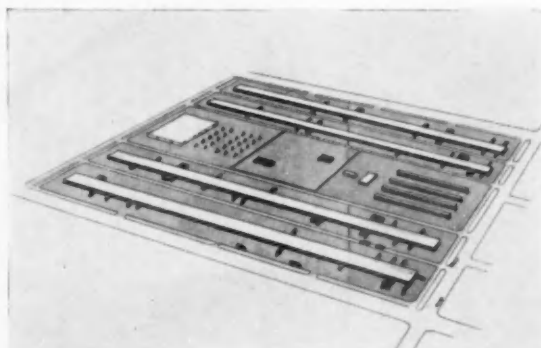
**FORD TRUCKS COST LESS...**

*less to own... less to run*

*...last longer, too!*

## \$33 Million Terminal

Here's a bird's-eye view of a new \$33 million truck terminal to be erected in Chicago's southwest side. Four terminal buildings, each over ½-mile long will occupy a 160-acre site, will have total capacity of 1600 doors. In addition to this space, facilities will include administration building, control tower, parking areas, fuel facilities, warehousing equipment, repair facilities. Drivers will be interested in its 600-unit motel, bowling alleys, cafeteria, restaurant, recreation area and retail stores.



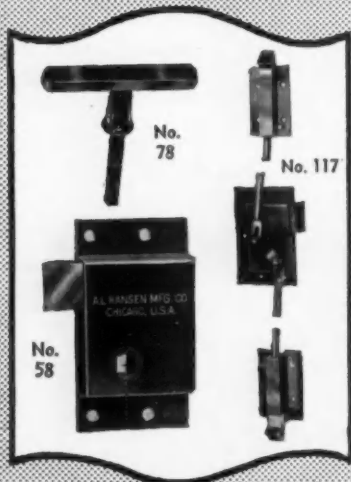
## AERO-BUILT INTER-CITY COACHES



General American Aero Coach equipped with Hansen Hardware.



*Equipped with*  
**HANSEN  
HARDWARE**  
*Help Solve the Nation's  
Transportation Problems*



**THIS BUS**—subjected to constant travel and hard usage—is fitted with Hansen Hardware. And for good reason—the hardware used must withstand severe service.

Hansen is tough and can take it. Built to withstand rough, constant usage, it stands up and delivers! Just the kind of Hardware you want on the bodies you design, build or use.

Accept nothing but the best! Specify —buy—install—and use HANSEN.

### HANSEN PRODUCTS ILLUSTRATED

NO. 58 CAB LOCK, with reverse bolt, without outside handle. Easy to install.

NO. 78 ALL-STEEL HANDLE. Removable. Permits securely locking door and removing handle.

NO. 117 THREE-POINT SLAM-AND-TAKE-UP LOCK. Supplied complete with ½" dia. rods.

### SEND FOR NEW CATALOG

—illustrating and describing the complete Hansen Line, including many new and unique items.

**A. L. HANSEN MFG. CO.**

5047 RAVENSWOOD AVE. CHICAGO 40, ILL.

Write  
TODAY!

## Mechanic Shortage

Continued from Page 133

front and rear, that special tires should be considered by the design engineers.

And finally he suggested the consideration of plastic panels which could be sealed to the body metal to provide a long-lasting neat appearing body. Plastic panels of this type, he said, would be less expensive to replace than some of the present metal sides.

### Trailer Problems

Andrew Ambli, of Briggs Transportation Co. took aim at the trailer builders. His pet peeve was the lubricating facilities for trailers which he said were inadequate and practically impossible to cope with during icy weather. Grease fittings have been reduced, but there are enough left to cause trouble when mechanics miss them or cannot get to grease them in winter.

Ambli felt that manufacturers were not putting sufficient time and thought into the design of trailer hardware, floors and insulation. Standard open top trailers, he said, seldom can be sealed properly without fussing with unwieldy tarps that do not fit or soon sag, permitting cargo damage. He suggested a new type of split-header which is easier to remove and set up. He also described a method of securing canvas to improve appearance and to take care of various size bodies.

END

Please Resume Reading Page 78

**THE MOST *TROUBLE-FREE*  
IGNITION CONDENSERS  
EVER DESIGNED**



ADVERTISED IN  
The Saturday Evening  
**POST**



**ECHLIN**



*Ignition*

CONTACTS  
COILS • CONDENSERS  
& OTHER AUTOMOTIVE  
ELECTRICAL PARTS

ECHLIN MANUFACTURING COMPANY • NEW HAVEN 5, CONN. • U.S.A.  
ECHLIN IGNITION OF CANADA LTD. • 50 CONNIE ST. • TORONTO 15, CANADA

# The Only 100

## PROVED IN OVER 100 MILLION

- No beefed up passenger car engine matches Reo's bigger payload power.
- No "laboratory tested" engine matches Reo's proved performance record.
- No other truck manufacturer matches Reo's 100,000 mile warranty.



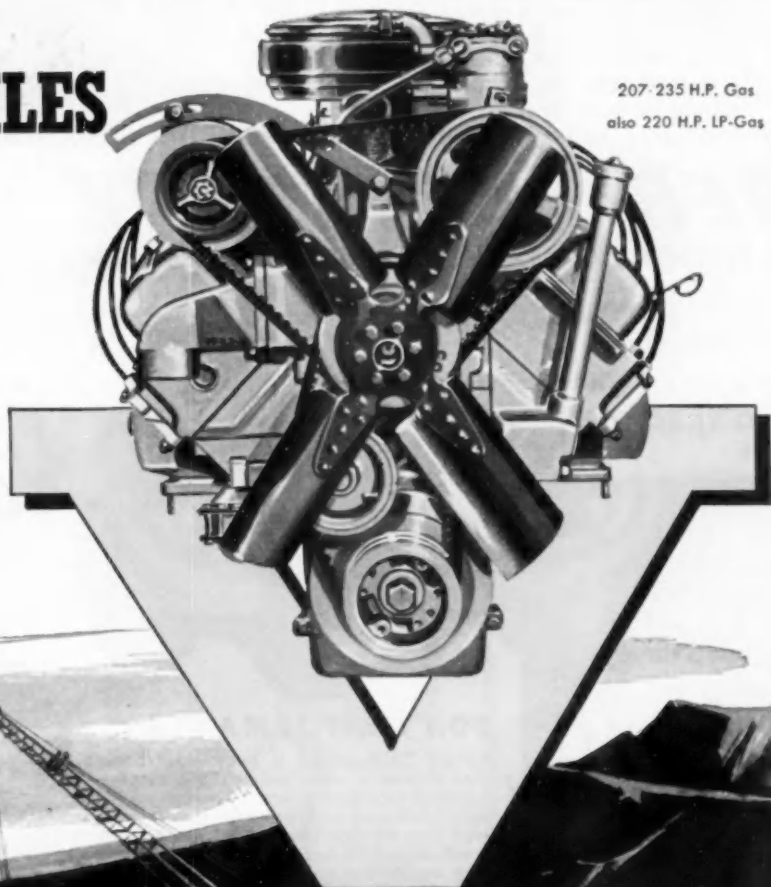
THE 100 MILLION MILE ENGINE Designed, Engineered and Built by REO

# Million Mile V-8

## TRUCK MILES

207-235 H.P. Gas  
also 220 H.P. LP-Gas

# BIG



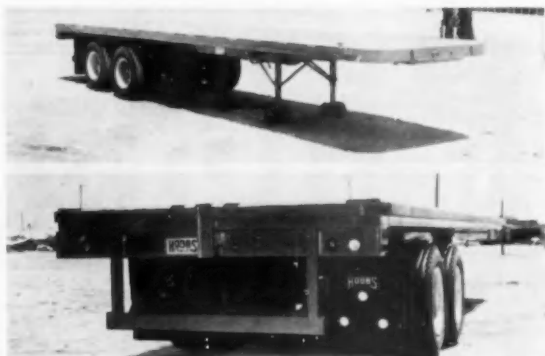
**Tested by Truckers, and Backed by REO'S 100,000 MILE WARRANTY**

COMMERCIAL CAR JOURNAL, December, 1956



## Hobbs' New Platforms

New Hobbs all-purpose platform trailers feature increased use of high tensile steel, especially in the front center beam section, for greater carrying capacity and less weight. Models are available in 2-ft progressions from 33 to 41 ft. Tandem units come in 31, 33 and 35-ft models and are equipped with new design rear bumper and spare tire carrier.



## REO selects CENTURY AS FACTORY STANDARD LP-GAS CARBURETION

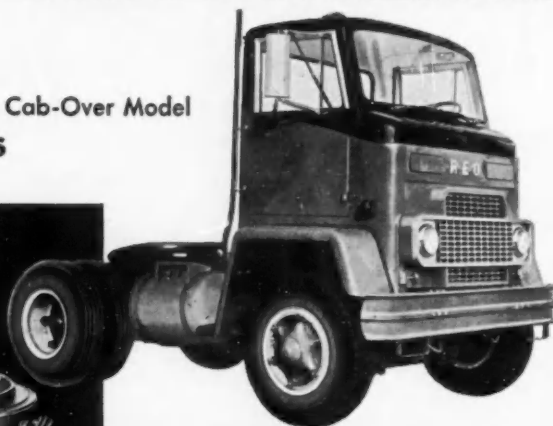
*Exclusively*

on Super V-63 Cab-Over Model  
**REO TRUCKS**



Four-barrel, down draft Century metering valve carburetor factory installed on Super V-63 Cab-Over Reo Trucks.

Dual throat, down draft Century metering valve carburetor now optional equipment on all Reo Trucks.



### FOR PERFORMANCE

ONLY THE BEST is good enough for Reo Trucks... and Century LP-Gas Carburetors have proved best by every test, in both laboratory and road operation. That's why Reo selected Century 3C (controlled combustion) Carburetors as exclusive factory equipment on the Super V-63 Cab-Over Reo Trucks.

The big difference in the Century 3C is the metering valve, and it makes a big difference in engine performance. Why? Because the metering valve controls and proportions the gas to give perfect fuel-air mixtures at any throttle setting — starting, idling and full power — regardless of changes in temperature, altitude or pressure. No wonder Reo has joined the ever growing list of manufacturers who install Century Carburetion. Write for literature today! Sales and service everywhere.

**CENTURY GAS EQUIPMENT COMPANY**  
6855 East Rosecrans Blvd. • Paramount, California



Set it!  
Seal it!  
Forget it!

# CENTURY METERING VALVE LP-GAS CARBURETION

## Meet the "Trailerator"

Continued from Page 80

we go from here, Ratnor replied: "We hope that trailer manufacturers will adopt testing equipment along the lines exhibited here. When they do, it will enable truck operators to specify specific Btu capacity when ordering their trailers."

He then went on to point out that, with proper industry standards established, fleet operators could purchase similar equipment which they could use for their own checks. These would include a check on performance of new equipment. But perhaps even more important, could provide periodic measures of efficiency as the equipment grows old.

It is, of course, well known that older refrigerated units absorb water and are subject to other factors which decrease their efficiency. With "Trailerator" equipment these larger operators could spot the need for rebuilding, re-insulating or at least drying out. It is even possible that pooled equipment could be made available in key locations for joint use by a number of carriers.

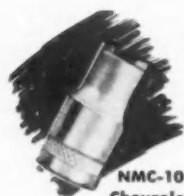
As far as the trailer manufacturers are concerned, it should be added that the Truck Trailer Manufacturers Assn. was a cosponsor of the exhibit. TTMA reports that further development of trailer rating techniques is high on its project agenda.

END

Please Resume Reading Page 82

# Mechanics know how —

## MODERN TOOLS SPEED FLEET SERVICE!



**NMC-10**  
Chevrolet  
Distributor Socket

No doubt about it, you can't keep up with today's exacting automotive service and fleet shop repairs without the modern Tools that put you in the ballgame. In fact, if you don't have the modern Tools that have been designed by New Britain to make your job easier and faster, you just don't hit the high standard in fleet vehicle maintenance and repair.

In addition to the scores of standard New Britain Sockets and Drive Parts that thousands of good mechanics have depended on for years, there are many new Tools, that can save time and trouble for you, and probably should be in YOUR Kit right now! Ask your Jobber about these modern New Britain Tools that fleet shop mechanics choose.

*Here —* **ARE JUST A FEW OF THE TOOLS  
THAT YOU SHOULD BE WORKING WITH**

*Right now!*



**FG-12**  
Ford Feeler Gauge



**P-65**  
Brake Spring  
Pliers Adapter



**M-110**  
2-in-1 Brake Tool



**E-41**  
1/2 Inch  
Distributor  
Wrench



**T-125**  
Tube Cutter



**RW-14 to RW-28**  
Ratcheting Box Wrenches



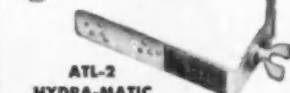
**E-42**  
9/16 Inch  
Distributor  
Wrench

**E-40**  
Point Bender

### PLUS THIS GREAT NEW FAMILY OF AUTOMATIC TRANSMISSION TOOLS



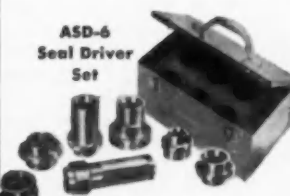
**AH-10**  
HYDRA-MATIC  
Band Adjusting Tool



**ATL-2**  
HYDRA-MATIC  
Throttle Arm Gauge



**ATL-3**  
HYDRA-MATIC  
Throttle Arm Bender



**ASD-6**  
Seal Driver  
Set



# New Britain

THE NEW BRITAIN MACHINE CO. • NEW BRITAIN, CONN.

## HAND TOOLS

## For Better In-plant Feeding Turn the Job over to the Blind

FOR MANAGERMENTS faced with the problem of supplying adequate feeding facilities for their employees, state agencies for the blind may have the answer. Many companies, among them Consolidated Freightways in Portland, Ore., have contracted with their local agencies for the blind to supply in-plant feeding facilities. They have found that these vending stands and cafeterias, managed by highly-trained, properly supervised blind workers, provide efficient services with few headaches.

Typical of management's reaction to the service are these comments from R. E. Doherty, Jr., Consolidated's vice president in charge of administration and personnel:

"... our management and employees are pleased with the arrangement and give their support, moral and by patronage, to the two blind managers ... This service takes us, the Company, out of the restaurant business,

in which we certainly do not want to be, and are not qualified to be, involved."

This dislike for getting into another totally different line of business is shared by many managements, but some have found no alternative. They are too small to be attractive to the large contract firms doing institutional feeding, and yet the individual operator, working on his own, turns out to be a marginal operation and one that is none too satisfactory. For these managements, an arrangement with their state's agency for the blind may well provide the most satisfactory answer.

### Flexible Program

How does the program work?

First step is to contact the agency for the blind in your state. The agency will send a representative to survey your requirements and make recom-

mendations on the type of program and installation that will meet your needs.

Installations vary from a simple one-man stand, selling wrapped sandwiches, candy and a few other items, to a full-scale cafeteria serving hot meals around the clock. The obvious controlling factors are the number of employees, the hours of operation and the competition from other feeding places in the vicinity.

The price scale is also a matter for discussion. In most states, the program as a whole is self-sustaining. From total income the operator must pay such things as the cost of materials and salaries for assistants. The state agency also often receives a percentage of the gross to cover amortization of equipment, management services, and the guaranteeing of a minimum wage to the operators of smaller stands.

Most companies using the service usually furnish the location for the installation without charge to the operator. Many companies also supply the operator with free utility services such as light, water and heat. These

(TURN TO PAGE 144, PLEASE)

## NOW . . . POWERFUL, POSITIVE, SAFE HOLDING



## WITH Mico AIR BRAKE LOCK

- Holds air at axle—NOT throughout entire air brake system
- Cross-flow construction allows unrestricted flow of air
- Completely Reliable—already acclaimed by users from coast to coast
- Simple installation
- Trouble-free operation—only one moving part
- Heavy-duty construction—outlasts life of truck or bus
- Low initial cost—negligible upkeep

WRITE TODAY  
FOR COMPLETE  
INFORMATION

## Mico

MINNESOTA AUTOMOTIVE, INC.  
1101 No. Front St., Mankato, Minnesota



Post Hole Digger



Dump Trucks



Fire Equipment



Tow Trucks



Cement Mixer



Ditch Digger

# FOR ENGINE VALVES

## You can count on Thompson

**T**HOMPSON PRODUCTS has specialized in engine valves for over 50 years. Thompson valves are the result of the same engineering, metallurgy and manufacturing skills that produce the world's finest aircraft engine valves. In the Thompson line you'll find the valve you need for any job—the replacement valve that gives your customers best value for their money every time.



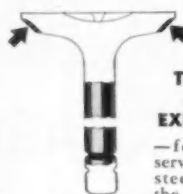
**THOMPSON "S" EXHAUST VALVE**

—the world's best-known exhaust valve for cars, trucks, buses and tractors. Made from a variety of fine heat and wear-resisting valve alloys, because different valve alloys are required for different engines. Thompson "S" exhaust valves are your best bet for regular installation.



**THOMPSON SODIUM-COOLED EXHAUST VALVE**

—this super exhaust valve is used as original equipment by leading manufacturers of heavy-duty automotive engines. It is an adaptation of Thompson sodium-cooled aircraft engine valves. The sodium in the hollow stem rapidly drains the heat from the valve head into the cooling system.



**THOMPSON AEROTYPE EXHAUST VALVE**

—for heavy-duty service. Aircraft valve steel—armored on the valve face with one of the hardest known alloys, developed by Thompson metallurgists. Used by leading manufacturers as original equipment. Recommended for replacement in trucks, buses and tractors where resistance to wear, burning and battering is a prime consideration.



*Sell the complete line of*  
**THOMPSON ENGINE AND CHASSIS PARTS**  
*The Original Equipment Leaders*



See your  
**Thompson Products Jobber**

THOMPSON SERVICE SALES  
 2209 Ashland Road • Cleveland 3, Ohio

## In-plant Feeding

Continued from Page 142

savings to the operator are reflected in lower charges to employees for the food they buy, and company managements accept this subsidy as part of normal business expense. These arrangements, however, are flexible and can be negotiated in each case.

Once the details have been worked out and a contract signed, your com-

pany is relieved of further responsibility for detailed supervision. The state agency purchases and installs the necessary equipment, which generally remains the agency's property. From its list of qualified people the agency assigns a manager who has been thoroughly trained for this job. If you have a large operation, with potentially high volume, you will most likely get a man or woman with prior experience, either as manager of a smaller installation or as assistant manager at a large one. The manager,



Here is a view of the cafeteria operated for Consolidated Freightways at Portland, Ore., by the Oregon Commission for the Blind. Space was provided by the fleet, facilities by the Commission.

**Why Risk Losses?  
Get positive protection  
for perishable cargos!**



## HUNTER <sup>LP</sup><sub>GAS</sub> CARGO HEATER

Here's safe, sure, positive protection against freezing or harmful heat loss — standby and enroute. The Hunter LP-Gas Cargo Heater gives you a constant flow of controlled heat to every part of your cargo space.

Two easily installed models: UH99, illustrated at right, is a complete self-contained unit readily transferable from trailer to trailer; Model UH98 is for permanent installation with its bottle carrier mounted under the trailer floor.

### OUTSTANDING ADVANTAGES

- Exclusive new jet-type burner forcefully entrains high volume of heated air.
- Operates for 24 hours at top heat — at very low cost. 16,000 BTU/hr.
- Completely independent of vehicle engine and battery.
- Accurate thermostatic control — no "hot spots" — no "cold spots."
- No moving parts — no maintenance problems.
- Safety pilot — meets all ICC safety regulations.
- Compact — takes up less cargo space — cargo can be placed within 4 inches of heater.
- Operates in coldest weather — on or off the road.

Write for literature, complete specifications.



**HUNTER**

MANUFACTURING CO. 30525 Aurora Road, Solon, Ohio

Transport Heating and Refrigeration



in turn, hires any staff needed, with the advice of the state agency. These assistants, who are on salary, may be sighted people.

Supervision, on a regular and continuing basis, is given by the State agency. With a fairly large pool of trained people, they are able to furnish substitutes on short notice, and to carry on a regular program of developing operators into positions of increasing responsibility. Procedures have been worked out so well, however, that turnover is remarkably low.

Management people who have turned to this program to solve their staff-feeding problems have been pleased to find that the program not only helps handicapped people to become self supporting, but also solves the problem easily and simply.

### Compact Fire Truck



Reading Body Works, Reading, Pa., has designed this unit for 1/2 to 1 1/2-ton standard chassis with 6 1/2 to 11-ft body lengths. It can be custom designed to individual requirements. General construction is 14- and 16-gage steel with understructure of 12-gage steel cross sills. Vertical compartments can be adapted for storage of several different types of equipment. Body can be adapted to carry additional fire hose or with full-length seats on each side with lift-up type seat over extra storage bins.



# Last twice as long — cost you half!

**WHY** should you pay new truck taxes twice — when it isn't necessary? Why pay delivery charges twice? You know it's common practice to replace the average multi-stop delivery truck after 5 years but *Divco Trucks last 10 years and more!*

**PROOF?** Yes, there's proof of this. 80% of all the Divcos ever built are still in use—and Divco has been building durable trucks, especially designed for punishing multi-stop service, since 1927.

**SAVE!** By investing wisely in the longer lasting, tougher Divco, you not only reduce your eventual capital outlay in delivery trucks—but protect yourself against inflationary price trends. You get a complete unit designed and built by one responsible manufacturer. No need to get your chassis one

place and have somebody else build the body and insulate and refrigerate. Divco builds and stands behind the entire unit — with parts and service available in your local area.

**EARNINGS!** Because its life is double the average, a Divco Truck earns more for your business, contributes more to the efficiency of your operation. And we have case histories for your study—showing how earnings increase because of the very low operating and maintenance costs of Divco Trucks.

**READY!** There's a Divco representative near you. He's prepared to outline in detail just how the doubly-durable Divco Trucks can cut-in-half your truck taxes and your equipment outlay. He'll be seeing you soon—but if you want to talk right now, give him a 'phone call for quick action.

## **DIVCO TRUCKS**

**DIVCO TRUCK DIVISION**

**DIVCO-WAYNE CORPORATION  
DETROIT 5, MICH.**



**DON'T PAY EQUIPMENT TAXES TWICE . . . GET DOUBLE TRUCK LIFE WITH DIVCO!**

# FISK STEEL BREAKER



## ELIMINATES:

- IMPACT AND BRUISE DAMAGE
- GROOVE CRACKING AND CARCASS CUTS
- TREAD GROWTH
- TREAD SEPARATION

## GUARANTEES

— LONGER TIRE LIFE  
— LOWER COST PER MILE

## SEND FOR THIS FREE BOOKLET!

Get all the money-saving facts about Fisk Steel Breaker Tires in this free booklet. Just jot "Steel Booklet" on your letterhead and mail it to: Fisk Tires, Rockefeller Center, New York 20, N. Y.

## NOW—PERFORMANCE-PROVED FISK STEEL BREAKER GUARANTEES MORE MILES PER DOLLAR!

Fisk "Steel Breaker" tires deliver every mile from every 32nd of tread rubber... RIGHT UP TO RECAP TIME!

"Steel Breaker" tires run up to 40° cooler, and cool-running tires deliver more miles.

### RELAXED TREADS

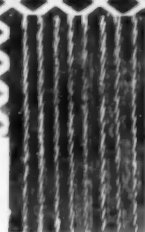
Fisk's Band of Steel relaxes the tread rubber, and every ounce of relaxed tread wears longer than treads operating under stress and tension. Sharp, rugged stones and other penetrating objects no longer injure the rupture-proof tread area... this tire rolls on till every 32nd of tread has delivered full new-tire mileage.

Groove cracking or cut growth can't rob you of precious

# STEEL IN VITAL TREAD AREA

## X-RAY PROOF!

1290 high-carbon steel cables—47,767 hardened, yet flexible, tool-steel filaments over 5¼ miles long make the tire virtually injury-proof in the vital tread area... no increase in inflation, no hard ride, no limitation of vehicle speed.



1290  
STEEL  
CABLES

## OVER 5,000,000 MILES OF PROOF!

IN MORE THAN 5,000,000 MILES of testing by Fisk engineers and by fleet operators, not a single Steel Breaker tire failed—not a single cut or rupture pierced the breaker to damage the carcass!

tire miles... "Steel Breaker" tires won't crack, and cuts can't grow!

**MORE RECAPS**—You get more tires to recap—more recaps per tire. Makes possible recapping every tire with full strength, full protection for retread after retread.

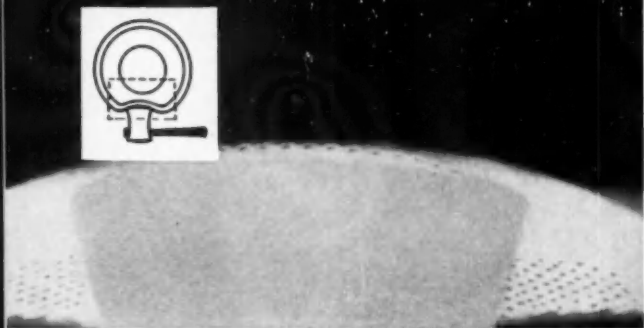
**NO COSTLY SECTION REPAIRS**—Steel Breaker ends expensive tread-area section repairs. Cuts, cracks never reach the cord body... no penetration by stones or other large objects.

**LESS "DOWN" TIME**—Steel protects against 80% of tire failures. Result: less "down" time... more uninterrupted trips. You get lower operating costs on new tires, on retreads.

# STOPS TRUCK TIRE FAILURES

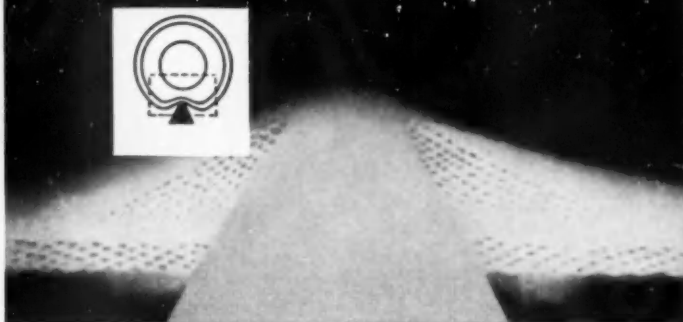
WHERE 80% OF ALL TIRE INJURIES OCCUR

**X-RAY PROOF!**

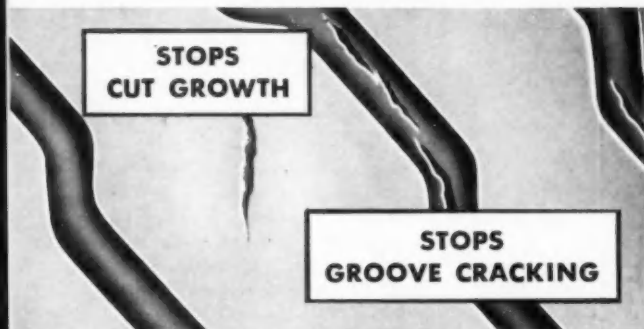


**WON'T CUT.** Here a tire is slashed by a sharp-edged ax that would ruin an ordinary tire. X-Ray proves that Fisk Steel Breaker protects the tire in the tread area. Stops sharp stones, glass, pieces of iron from penetrating—eliminates tire carcass damage.

**X-RAY PROOF!**



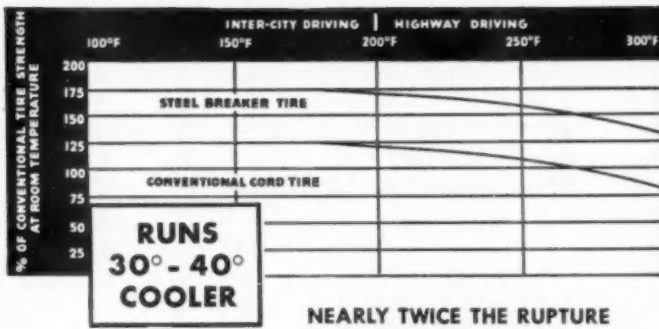
**WON'T RUPTURE.** X-Ray proof that Steel Breaker rupture-proofs tire body—stops penetration by the rupture cone. X-Ray proof that flexible Fisk Steel Breaker "gives" rather than breaks under impact—eliminates carcass damage.



**STOPS  
CUT GROWTH**

**STOPS  
GROOVE CRACKING**

Fisk's "Band of Steel" blocks carcass growth from the tread area... eliminates growth strains and stresses. Groove cracking is positively eliminated. Cuts can't grow—cracks can't progress through the Steel Breaker into the tire body.



**NEARLY TWICE THE RUPTURE PROTECTION AT ANY SPEED:**

Steel Breakers retain their full strength at any speed, at extreme temperatures. Crown strength nearly twice as great as ordinary tires at 300°... maintains full strength in recap after recap. Steel eliminates extra bulk in shoulder area and "heat build up" under flexing... a chief cause of separation.



# FISK TIRES

**DIVISION OF UNITED STATES RUBBER**

Rockefeller Center • New York 20, N. Y.

# Vehicle Problems In The Arctic

By John B. Hulse

Managing Director  
Truck-Trailer Manufacturers Assn.

IN THE ARCTIC it isn't just the cold, it is really the chill factor that determines whether or not vehicles will operate. The chill factor, simply expressed, is the product of the temperature and the wind. For example, at minus 30 deg F and with a 30 knot wind, exposed human flesh will freeze in 30 sec.

Although motors have no flesh, they experience the same rate of heat transfer as humans. Below minus 40 deg F and with prevailing winds on the Greenland ice cap, neither gasoline or diesel motors can be started. To be operational they must (1) be kept running, (2) stored in a heated garage or (3) stored out of doors with

an electrical heating element plugged into a power source.

Fuel must be entirely free of water, or fuel lines, carburetors, jets, etc., will become clogged with ice. Lubricants used are standard army issue for arctic operation and generally speaking give no trouble.

## Even Steel Gets Cold

Sixty/forty arctic antifreeze is used since it has a lower freezing point than 100 per cent permanent type antifreeze. Tires become much more brittle and have a tendency to suffer rather rapid abrasion from sharp ice particles.

Steel likewise exhibits strange characteristics, fracturing sometimes under stress of relatively small magnitude. Trailer supports (landing gear) braces appear to be too weak and have been the only troublesome item on the trailers operating at Thule.

Spark plugs, storage batteries take an exceptionally heavy beating, not so much from the cold as from extensive idling, since no one stops a motor until he has finished with the vehicle. In winter the idling rate must be appreciably increased.

## "Swings" Haul Freight

Transportation on the ice cap, which covers six-sevenths of Greenland, is accomplished in several ways—not including dog teams. The Transportation Arctic Group operates sled trains, called "swings," Weasels, helicopters, L-20 airplanes as well as conventional vehicles.

The sled trains are made up of D-8 "Cat" Tractors with 50-in. wide tracks, pulling five sleds. Usually four or five trains make up a "Swing." One train will consist of one or two fuel supply sleds, a generator sled, a mess Wanigan, and a command Wanigan. This last Wanigan contains bunks for the crew and radio equipment for communication. The other trains haul cargo sleds.

Once they start out, the Swings operate 24 hr a day, except for necessary servicing stops. Crews consist of a platoon leader, three tractor drivers for each "cat," a cook, radio operator and usually two mechanics. Speed of travel varies up to a three or four mph depending on condition of the snow surface.

# -4 Way Leader for heavy duty valve performance

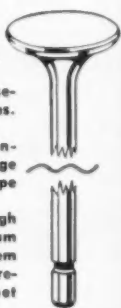
## TWO PIECE CONSTRUCTION

—a "must" for increased horsepower and higher compressions.

**RMC** bi-metal valves feature:

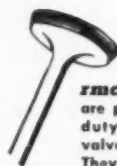
**HEADS:** of austenitic, non-magnetic, steel. Resists warpage and corrosion. Keeps its shape under extreme temperatures.

**STEMS:** **RMC** specification high alloy steel. Provides maximum wear resistance at high stem temperatures. Hardened to prevent "riveting" from tappet impact.



## STELLITE FACES

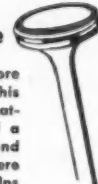
**RMC** valves with Stellite faces are preferred for use in heavy-duty engines. They increase valve life from two to five times. They maintain better seating and compression under the hottest and toughest operating conditions—keeping horsepower up, fuel consumption down.



## HEAT BANDS an **RMC** exclusive

Some engines burn valves more readily than others. Combat this condition with **RMC** "heat-banded" valves. A band of a non-burning alloy fused around the outer edge of the head, where most burning takes place, helps prevent burning, increases valve mileage.

LOOK FOR THIS SEAL on every **RMC** heavy-duty valve box. It's your assurance of dependable "super-duty" performance under the toughest operating conditions.



## ORIGINAL EQUIPMENT ENGINEERED

**RMC**, a basic manufacturer supplying original equipment for over a half century, knows the engineering and production requirements of the engine manufacturer. This assures you of a better manufacturing, more accurate tolerances and original equipment performance with every **RMC** valve.



## SOLD

by Leading Automotive  
Replacement Parts Jobbers

## WAREHOUSED

in Most Principal Cities

## **RMC** COMPONENT PARTS



Springs



Valve Spring Inserts



Guides



Valve Seats

## RICH MANUFACTURING

BATTLE CREEK  
MICH., U.S.A.

BASIC VALVE MANUFACTURER  
FOR ORIGINAL EQUIPMENT  
SINCE 1908





## Meet the car to put your fleet 3 years ahead!

This big beauty is 3 full years ahead *throughout*... with brilliant Flight-Sweep Styling to impress your customers today and reward you again at trade-in time... tremendous new power and mighty Total-Contact Brakes... revolutionary new Torsion-Aire "floating" ride... a longer, stronger Safety-Power Frame... a new 118-inch wheelbase.

Yet with all these 1960-new features, Plymouth is still one of the *lowest-priced* fleet cars you can buy. It's still top car for low-cost operation, as records repeatedly show.

Call your Plymouth dealer today for the facts. He'll show you how easy it is to put *your* fleet years ahead!

**3-YEAR-AHEAD TORSION-AIRE RIDE**... superb riding comfort all day long... and *doesn't* cost extra.

**3-YEAR-AHEAD TOTAL-CONTACT BRAKES**... greatest braking advance in 25 years... linings last up to 50% longer... "fade" is greatly reduced... simple to service.

**3-YEAR-AHEAD POWER FOR SAFETY**... choose either Plymouth's fabulous new Fury "301" V-8 engine... or the fast-stepping PowerFlow 6 for outstanding economy.

**3-YEAR-AHEAD SPORTS-CAR HANDLING**... your drivers will love the way this car corners... no dip or sway on even the sharpest turns... no "nose dive" when braking.

Among fleet cars, too... **SUDDENLY, IT'S 1960...PLYMOUTH!**





## Don't let this happen to your drivers in 1957

Be sure the next trucks you buy have glare-reducing E-Z-EYE Safety Plate Glass. The neutral blue band at the top of the windshield protects your eyes from irritating sky glare. And the light green tint in the lower part of the windshield and in the side windows helps keep the cab cooler.

The added comfort of E-Z-EYE is worth far more than the slight additional cost.



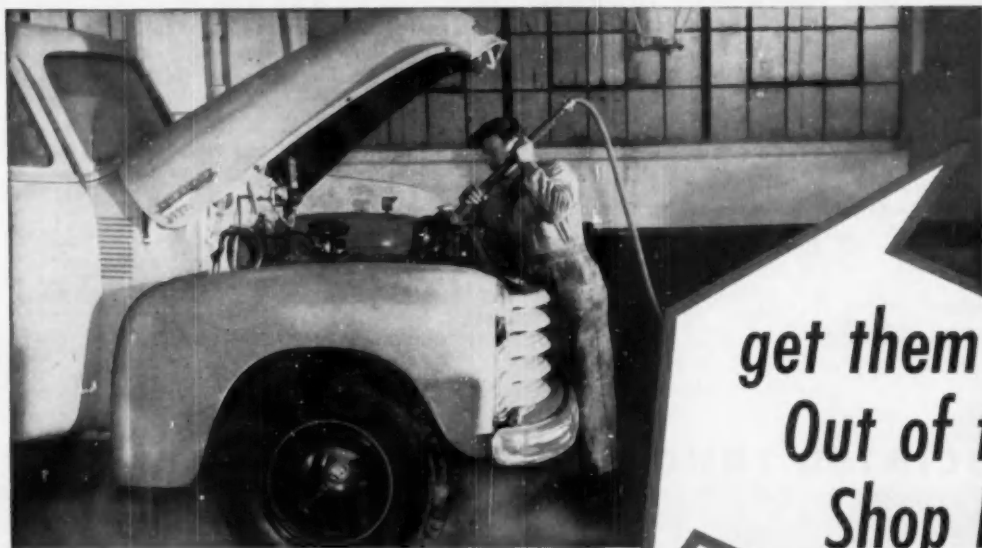
### E-Z-EYE SAFETY PLATE GLASS

with the shaded windshield

*Reduces Glare, Eyestrain, Sun Heat*



LIBBEY • OWENS • FORD GLASS COMPANY • TOLEDO 3, OHIO



get them  
Out of the  
Shop **FAST!**

**KEEP THEM ROLLING... AND EARNING**

WITH NEW SERIES "1800"

HYPRESSURE

**Jenny**

**STEAM CLEANER**



Hypressure JENNY steam cleaning *before* servicing or repairs, cuts vehicle "down-time" almost in half by removing the grease, oil, muck and road dirt that slows mechanics down and runs up costs. That means double savings; less shop labor expense; shorter "lay-ups" and many more profitable road miles.

JENNY cleans *fast*, too! For example, one man with Hypressure JENNY can sanitize and deodorize a refrigerator truck body in less than an hour, a full 10 hours job by any other cleaning method. And there are scores of other jobs JENNY will do faster and better to keep your fleet rolling and earning.

Powerful, portable, Series "1800" Hypressure JENNY cleans anything... anywhere... starts instantly... is economical and easy to operate.

For complete details on how Hypressure JENNY can help *you* "get them out of the shop fast" and keep them rolling...

**NOTE THESE  
EXCLUSIVE FEATURES**

- ▶ 180 Gallons An Hour Steam Cleaning Capacity
  - ▶ 480 Gallons An Hour Flushing and Rinsing Capacity (optional)
  - ▶ Automatic Electric Ignition
  - ▶ Instant Starting
  - ▶ 2 Cleaning Gun Operation
  - ▶ Nozzle Control
  - ▶ Contamination-proof Water System
  - ▶ Positive Displacement Pump
  - ▶ Asbesto-Steel Vapor Hose
- plus many others

**MAIL THE COUPON TODAY! No obligation.**

**HYPRESSURE JENNY DIVISION**

**HOMESTEAD**  
VALVE MANUFACTURING COMPANY  
"Serving Since 1892"

P.O. BOX 90, CORAOPOLIS, PA.

Please send me complete information on Hypressure JENNY Steam Cleaner.

Name \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

## December News Roundup

Continued from Page 90

Pennsylvania, Ohio, Michigan, Indiana and Illinois. Operation is limited to services supplemental or auxiliary to existing rail service. The Central expects to save about \$600,000 a year with the new truck operation.

### Spray Painting School

Binks Mfg. Co. has again announced

a series of spray painting classes. It's the ninth year such classes have been offered. Dates scheduled so far are (1) Jan. 7 through Jan. 11, 1957, (2) Feb. 4 through Feb. 8, 1957, and (3) Feb. 25 through Mar. 1, 1957. For further details, write Binks Mfg. Co., 3122 West Carroll Ave., Chicago 12, Ill.

### TBEA Elects Stahl

Carl J. Stahl, president of Stahl Metal Products, Inc., took office as president of the Truck Body and

Equipment Assn. the first of this month. Other newly elected officers include Fearson S. Meeks, S. J. Meeks' Son, 1st vice president; Franklin B. Platt, F. B. Platt, Inc., 2nd vice president; and Paul R. Hafer, Boyertown Auto Body Works, secretary-treasurer.

### 1956 Truck Trailer Shipments

Vans:	September	Nine Months
Insulated and refrigerated.....	344	4,280
Steel.....	78	920
Aluminum.....	286	3,360
Furniture.....	117	1,683
Steel.....		
Aluminum.....	117	1,683
All other closed-top.....	1,720	20,223
Steel.....	696	8,662
Aluminum.....	1,024	11,561
Open-top.....	321	2,895
Steel.....	186	1,206
Aluminum.....	135	1,689
Total—Vans.....	2,502	29,061
Tanks:		
Petroleum.....	467	4,035
All other.....	67	811
Total—Tanks.....	534	4,846
Pole, pipe and logging:		
Single Axle.....	38	472
Tandem Axle.....	54	1,104
Total.....	92	1,576
Platforms:		
Racks, livestock, stake.....	98	741
Grain bodies.....	71	623
Flats, all types.....	616	6,705
Total—Platforms.....	785	8,069
Low-bed heavy haulers.....	219	2,463
Dump trailers.....	151	1,445
All other trailers.....	191	2,090
Total—Complete Trailers.....	4,465	49,550
Chassis.....	362	2,949
Total—Trailers and Chassis.....	4,827	52,499

Source: Industry Division, Bureau of the Census.

(TURN TO PAGE 156, PLEASE)



adds its  
endorsement  
to the  
growing list  
of  
fleet owners  
who use and  
recommend

**RU GLYDE**

## FOR MOUNTING and DEMOUNTING TUBELESS TRUCK TIRES

RuGLYDE is the choice of leading fleet operators because it is the *only* rubber lubricant that facilitates proper seating of the extra rigid, heavy beads of tubeless truck tires and makes mounting and demounting of these tires safer, faster and easier. RuGLYDE is harmless to rubber—will not induce rust—prevents scuffing by hand tools or mounting devices. Use RuGLYDE Service Kit to assure quick, easy, economical application.



**AMERICAN GREASE STICK COMPANY**  
MUSKEGON, MICHIGAN



**ASSOCIATED TRUCK LINES, INC.**  
15 ARCADE STREET, S.E. • GRAND RAPIDS 7, MICHIGAN  
December 20, 1956

Reliable Motor Supply, Inc.  
49 LaGrave Avenue  
Grand Rapids, Michigan

Gentlemen:

Attached is our confirming order for RuGLYDE Rubber Lubricant.

We now have over 1,300 tubeless tires on our equipment, and we plan to change over our entire fleet of 700 units to tubeless. When we first started using tubeless tires, our tire suppliers strongly recommended that we use RuGLYDE as a lubricant because it would make mounting and demounting of these tires so much faster and easier.

Our tire service men have found this to be true. They tell us that RuGLYDE does not dry up and provides the right lubrication for correct seating and sealing of the tire bead on the rim. We have also found RuGLYDE prevents bead damage due to rust.

On the basis of our experience, we are glad to recommend RuGLYDE to other fleets for mounting and demounting tubeless truck tires.

Sincerely yours,  
ASSOCIATED TRUCK LINES  
*Charles Brokowsky*  
Charles Brokowsky  
Director of Maintenance

### One Ton More Says Anthony



Anthony Co., Streator, Ill., says this tandem-axle, frameless dump trailer permits hauling up to 2000 lb more legal payload. Weight saving results from new-design lift and frameless construction. Body serves as its own frame, the axle as hoist hinge point. The 21-ft body has 17-yd capacity. Hoist's rated capacity is 25 tons.

# Records on 463 units prove Gates "T" Belts cost less per mile

Huber & Huber Motor Express, Inc., of Louisville, Kentucky, keep maintenance cost records on each of their 463 semi-trailers, to determine exact cost-per-mile for all operating expenses—gas, oil, parts, labor.

They have proof "on record" that Gates "T" belts have outperformed all others they have tried in a fleet that travels some 16,000,000 miles each year over routes that cover an eight-state area.



look  
for this

"T"\*

on both the belt  
and the label.

It is your assurance of the belt specially engineered for trucks and buses—the belt with a tough flexible cover and cords of extra high tensile strength.

**Huber & Huber**  
MOTOR EXPRESS, INC.

GENERAL OFFICE  
870 SOUTH 6TH STREET  
LOUISVILLE 9, KY.



GATES RUBBER CO.  
999 So. Broadway  
Denver 17, Colo.

Gentlemen:

It's a fact that Gates "T" belts cost us less per mile. We can tell by our books and by our experience with other belts. They have drastically reduced our road calls due to belt failure, and we can truthfully say they are a good start for any trucking business preventive maintenance program.

Respectfully yours,

*J. B. Duggan*  
Fleet Supt.  
J. B. Duggan

**Make this test:** Call your nearby Gates Jobber and have a Gates Specialist deliver a trial order of belts for your own on-the-job comparison test. Match the service life and cost-per-mile of Gates "T" Belts against any you have ever used. The Gates Rubber Co., Denver, Colorado—World's Largest Maker of V-Belts.


The Mark of



Specialized Research

# GATES TRUCK & BUS V-BELTS

7PA120



## JALTEN

**gives  
EQUAL STRENGTH  
with  
LIGHTER WEIGHT**

*Truck bodies are naturals for wear and tear—and Jalten sheets. Light and strong and corrosion-resistant, Jalten is fine for forming.*

## Low alloy, high strength Jalten offers good formability coupled with excellent corrosion and abrasion resistance

Jalten's high strength permits high design loads. It also permits a reduction in section when used to replace mild steels. Usually the reduction amounts to two gages affording a weight savings of approximately 25 per cent. Thus, dead weight can be eliminated—resulting in increased carrying capacity. Also, it is easily welded.

Jalten is furnished in four grades:

**No. 1**—possesses high strength, good formability and fabricating qualities—good resistance to low temperature impact.

**No. 2**—offers high strength, moderate formability—improved resistance to atmospheric corrosion.

**No. 3**—gives high strength—improved resistance to abrasion.

**No. 4**—provides superior formability and surface quality for bumper stock applications requiring plating.

Jalten Steels are available as sheets, strip, plates, structurals, bars and small shape sections.



### SEND FOR THIS NEW BOOK:

Chemical properties of Jalten  
Mechanical properties of Jalten  
Jalten equivalents  
Jalten application data

**Jones & Laughlin**  
STEEL CORPORATION • PITTSBURGH





# Minnesota's Newest PureTruck Station!

The best truck service ... finest food ... top sleeping comfort

**Landfall Service Center—open now**  
—is located just east of St. Paul  
on U.S. 12 and 100

These pictures show two of the reasons why truckers look forward to stopping at the new Landfall Service Center. Man, here's the finest truck service available... a wonderful air-conditioned restaurant... completely air-conditioned private sleeping quarters.

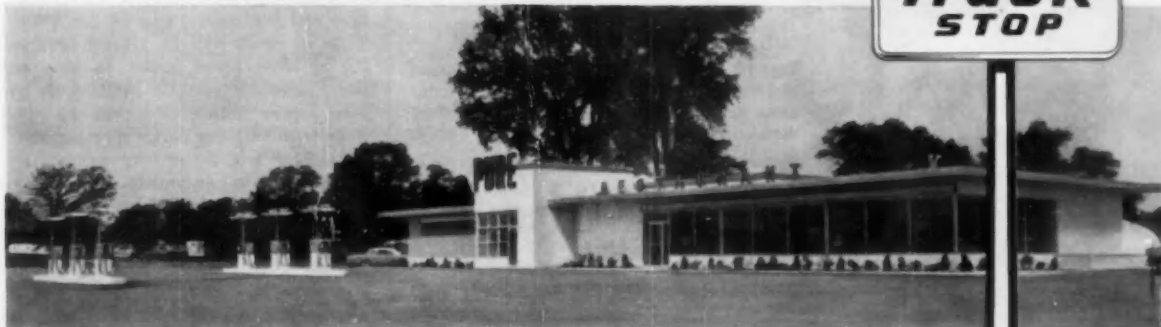
Here are more good reasons why you should schedule Landfall Service Center for your next run through the Twin Cities:

- Completely tiled restrooms and showers
- Spacious truckers' lounge
- Acres of parking area with outstanding lighting plant
- Broad approaches and drives
- Road and tire service
- Pure Truck-Tested products
- Roomy pump islands for fast in-and-out service
- Two drive-through service bays
- 24-hour expert mechanical service
- Mail and message center

Make it a point to schedule this and other fine PureTruck Stations on your list of stops—from the Dakotas to Florida—from Iowa to the Eastern Seaboard.



Can you remember seeing a finer restaurant at any truck stop—anywhere? The food is wonderful, prepared just the way you like it. At reasonable prices, too.



Located on the outskirts of St. Paul on U. S. 12 just east of the U. S. 100 intersection—is the finest truck servicing center in the Northern Midwest. Be sure to make the Landfall Service Center your regular stop!

Be sure  
with Pure



## December News Roundup

Continued from Page 152

### Driver School Schedule

The 1957 schedule for the Truck Driver Training School of North Carolina State College is as follows; Dec. 31-Jan. 25, Jan. 28-Feb. 22, Feb. 25-March 22, March 25-April 19, April 22-May 17, May 20-June 14, June 24-July 19, July 29-Aug. 23, Sept. 2-Sept. 27, Sept. 30-Oct. 25, Oct. 28-Nov. 22, Nov. 25-Dec. 20.

### 1956 Domestic Truck Factory Sales by GVW

	5,000 lb. and less	5,001-10,000	10,001-14,000	14,001-16,000	16,001-19,500	19,501-25,000	Over 25,000	Total
January.....	36,771	12,978	2,096	15,309	3,289	4,658	5,851	83,732
February.....	37,390	14,123	3,139	14,443	4,328	4,364	6,007	83,752
March.....	36,390	14,873	3,287	14,541	5,326	5,289	6,911	86,966
April.....	32,777	14,756	3,240	14,385	5,251	4,950	7,039	82,400
May.....	28,572	15,919	3,070	12,629	8,720	4,642	7,041	77,583
June.....	29,954	10,910	3,168	13,131	5,513	4,083	6,694	73,463
July.....	23,443	12,279	2,433	12,354	4,669	3,118	4,758	63,044
August.....	29,338	12,371	2,682	12,019	4,355	3,296	4,746	66,809
September.....	22,343	10,679	2,197	9,894	3,545	2,936	5,255	56,652
Total—9 Months—1956.....	278,944	118,990	28,212	118,705	42,199	37,307	54,304	676,661
Total—9 Months—1955.....	384,483	128,922	29,889	140,106	33,282	27,674	43,752	706,090

Source: Automobile Manufacturers Assn.

The monthly classes are conducted by the State College Extension Division in cooperation with the N. C. Motor Carriers Assn. Now in its

eight year of continuous operation, the school is under the direction of Russell M. Haynie, Jr. and Samuel F. Myers is field and road instructor. Those interested should apply to the Division of College Extension, Box 5125, N. C. State College, Raleigh, N. C.

the best brake jobs are done with



WHEEL CYLINDERS OR KITS with  
"E" Series Cups and Expanders  
and  
MASTER CYLINDERS OR KITS with  
Flexible Ribbed Secondary Cups



Cups are made of a new, heat-resisting compound that remains flexible even at 40° below zero! Hotter drums caused by higher speeds and quicker stops need better cups.

Many 1956 cars and over 70% of the 1957 cars are equipped with Expanders. EIS "E" Series Cups are the proper replacements for these cars.

BETTER SEE YOUR EIS DISTRIBUTOR!

Write for Catalog

EIS AUTOMOTIVE CORP., MIDDLETOWN, CONN.



**Michigan**—Reports are that two license plates per vehicle will be issued in 1957. Truck parking between 2 and 6 a.m. is prohibited in Saginaw.

**Montana**—Constitution has been amended to prevent diversion to other than highway use of highway use revenue.

**Nebraska**—Overweight fines are to be allocated 75 per cent to State Highway Fund and 25 per cent to general fund of county where fine was collected.

**New Jersey**—Complete commercial vehicle checks (licenses, registrations, log books, lights, equipment and weight) have been ordered. They'll be at least once a month in three locations—somewhere in northern, central and southern areas of the state. Time of check will be after midnight for at least three hours. So long as they meet the state's lighting regs, New Jersey registered trucks will not have to meet New York's new lighting regs. The new reciprocity agreement covers vehicle equipment only.

**New York**—Splash guard law requires all commercial vehicles operated in New York to have approved splash guards as of Jan. 1, 1957. Two license plates per vehicle will be issued in 1957 with the exception of trailers and motorcycles.

(TURN TO PAGE 168, PLEASE)

# This Inland Filler Strip



*provides  
positive  
leakproof  
protection!*

Inland Self-Sealing Strip assures a positive leakproof seal even under extreme conditions! Why? Because Inland's Filler Strip "zips" into a special locking channel after the glass is in place, putting greater pressure on fence and glass.

No matter what your sealing problem, whether it's glass or plastic, flat or curved, fixed or sliding window, Inland Strip requires no special mounting surfaces . . . channels . . . moldings or binders. It is a one-man installation . . . material, time and labor are reduced to a minimum.

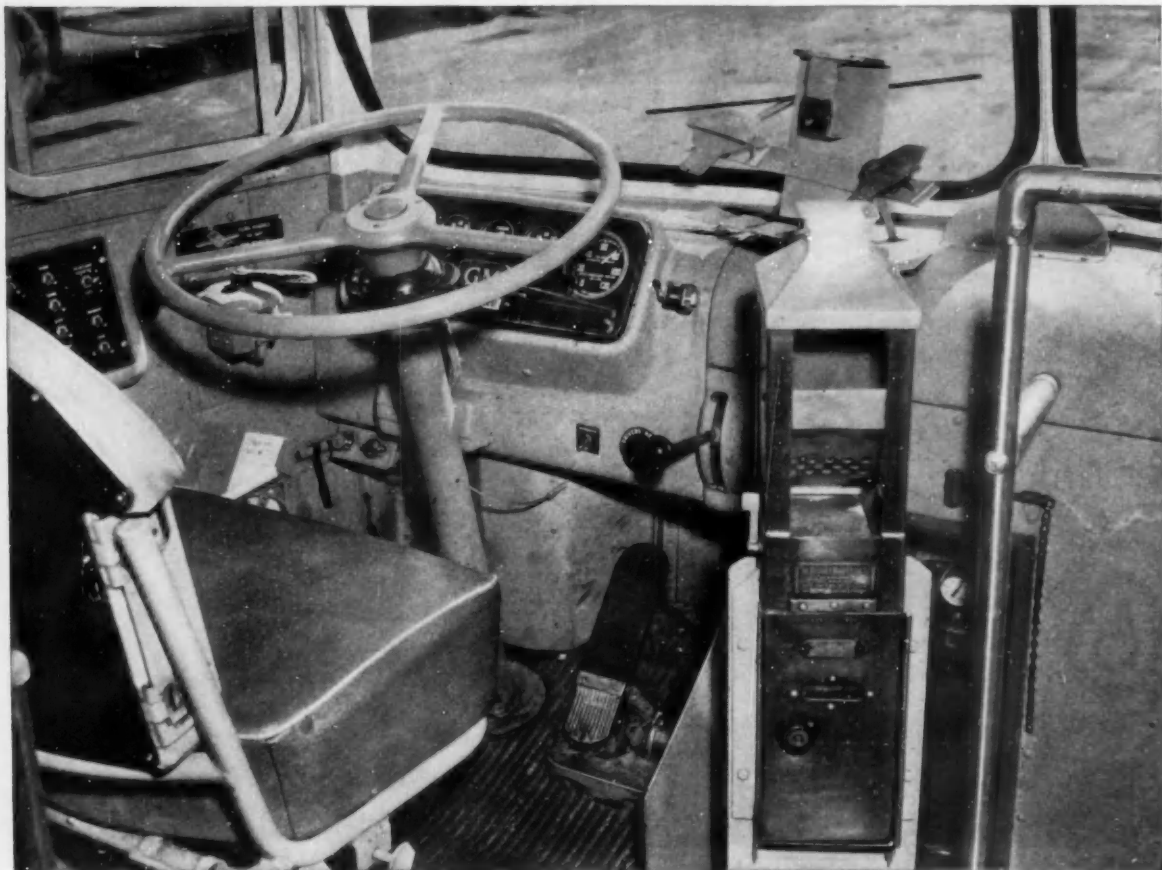
Inland Self-Sealing Weather Strip is offered in a wide variety of standard shapes and sizes . . . or may be manufactured to your specifications. When you choose Inland Strip you are assured of a trouble-free permanently-sealed installation. Write for complete details.

## INLAND

*self-sealing weather strip*  
(PATENTED)



INLAND MANUFACTURING DIVISION  
General Motors Corporation, Dayton, Ohio



**THE NEW LOOK**—Fifty new 48-passenger buses for The Cleveland Transit System of Cleveland, Ohio have driver's area coated with multicolor lacquer. Multicolor lacquer used on 25 of these buses is Cook Paint & Varnish Company's

"Coroflek." Multicolor lacquer on the other buses is Acme Quality Paints Inc.'s "Spat-A-Color." Multicolor is made under U. S. Patent No. 2,591,904; licensed from Coloramic Coatings, Inc., Los Angeles.

## MULTICOLOR LACQUER INCREASES SAFETY, IMPROVES APPEARANCE

Multicolor lacquer, based on Hercules® nitrocellulose, is now being used by an ever increasing number of progressive bus lines to combine safety with a decorative touch. Used in the driver's area, multicolor prevents glare and reflection from sun, headlights. Yet multicolor also offers all the other advantages you seek in a protective coating.

Easy to apply, this low-cost coating is quick drying to cut down on down time for rolling stock. It can be

applied over rough surfaces that do not need to be highly sanded or polished. And multicolor not only cleans quickly but remains clean longer. It's the perfect finish to change a drab interior into a colorful but safe area.

Multicolor coatings are available from many paint companies. For additional technical information and the name of your nearest supplier, just write Hercules.



Cellulose Products Department  
**HERCULES POWDER COMPANY**

INCORPORATED  
970 King Street, Wilmington 99, Del.

OL56-2

**For dependable Diesel starting  
in freezing weather...**



*Specify* **Leece-Neville** heavy-duty DC equipment!



**L-N DC GENERATORS**—heavy-duty, high output, low charging speed cut-in.

**L-N VOLTAGE REGULATORS**—constant level voltage control, rugged construction for long life.



**L-N MAGNETIC SWITCHES**—totally enclosed, water-proof, long-life contacts, standard mounting dimensions available.



**L-N CRANKING MOTORS**—maximum torque, fast cranking of high compression engines for quick, sure starts.



**L-N SERIES-PARALLEL SWITCHES**—new single unit type, compact, exclusive contact design.

● Plenty of power is needed to start modern Diesels, especially in cold weather!

It takes maximum torque, delivered by a dependable cranking motor... controlled by an efficient magnetic or series-parallel switch... powered by a battery kept fully charged by a high-output generator and regulator. Leece-Neville heavy-duty dc electrical systems meet these exacting requirements.

Whether you build or buy Diesel engines, it will pay you to find out more about L-N dc systems. See your local Leece-Neville distributor or write direct to The Leece-Neville Company, Cleveland 3, Ohio. *Distributors in principal cities... service stations everywhere.*

AA-4271



**YOU CAN  
RELY ON**

**Leece-Neville**

Automotive Electrical Equipment Since 1909

TRUCK • BUS • DIESEL • INDUSTRIAL • PASSENGER • RAILROAD • MARINE • OFF-HIGHWAY



ALTERNATOR SYSTEMS



DC GENERATORS



REGULATORS



CRANKING MOTORS

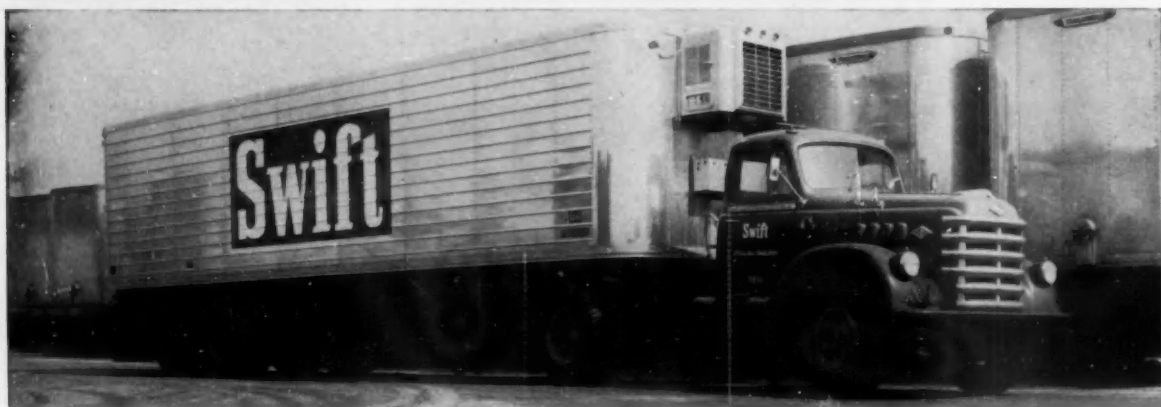


SWITCHES



SMALL MOTORS





Microlite being installed in a new Trailmobile insulated trailer. No special tools or skills are required. Long, resilient fibers help Microlite stay in place.

## Trailmobile relies on Microlite insulation to meet exacting customer specifications!

Take a look at the rigid requirements for insulation Trailmobile must meet in order to satisfy the exacting demands of customers like Swift & Co.

Products to be protected: fresh and smoked meats. Among the exacting specifications for truck insulation:

- It must be high in insulating efficiency.
- It must not break down under vibration . . . must not settle.
- It must be unaffected by temperature changes due to repeated loading and unloading.
- It must be light in weight.

Because Microlite meets *all* these requirements, it is the ideal insulation for trailers built to protect chilled or frozen foods.

Microlite is composed of extremely fine inorganic glass fibers, which form millions of dead air cells, giving it unusually high insulating efficiency. These resilient glass fibers make blankets that are remarkably light in weight, resist settling under vibration, and have very high tensile strength. For full details about Microlite, write: L·O·F Glass Fibers Company, Department 34-126, 1810 Madison Avenue, Toledo 1, Ohio.



### L·O·F GLASS FIBERS COMPANY

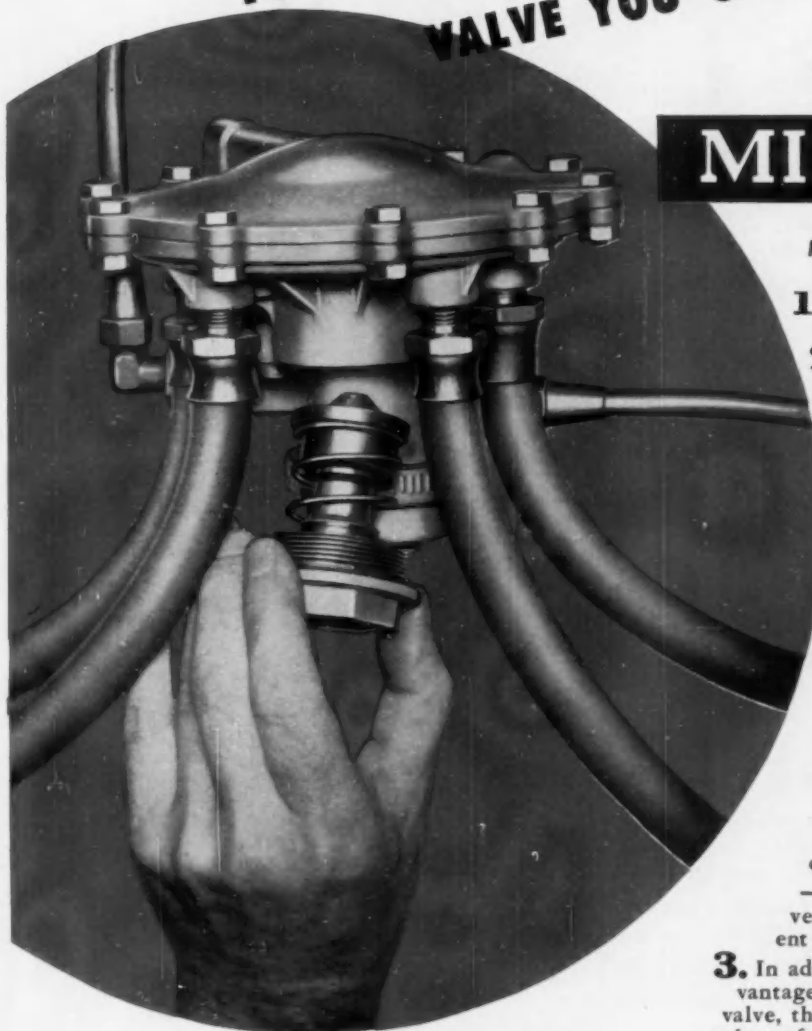
TOLEDO 1, OHIO

Makers of glass fibers by the "Electronic-Extrusion" process

IF YOU OPERATE TRUCK-TRAILERS  
YOU NEED THE BEST EMERGENCY RELAY  
VALVE YOU CAN BUY . . .

AND THAT'S

## MIDLAND



Midland's New Emergency Relay Valve Is Best For You Because—

**1.** It gives you 100% protection against "bleed-back".

**2.** It goes beyond ICC requirements—gives you many PLUS features like these:

—Midland valve can be quickly, easily serviced. You can remove and replace cartridge in a matter of minutes, *without disconnecting any lines or fittings.* (See photo.)

—Operation of Midland valve is automatic, yet *gradual.* (Automatic application of trailer brakes is *instantaneous*, of course, if trailer separates from tractor.) Valve's dual compensating feature provides automatic, gradual application of trailer brakes if pressure in the system drops below 45 p.s.i.

—Midland valve is designed to reduce application and release time.

—Midland valve safeguards against vehicle driveway without sufficient air in the system.

**3.** In addition to the actual operating advantages of Midland's emergency relay valve, there's the protection and dollar value of Midland's nation-wide service and parts facilities—hundreds of Midland distributors in the United States, Canada, and abroad.

Be safe, be satisfied—specify Midland Emergency Relay Valves on all orders of new equipment.

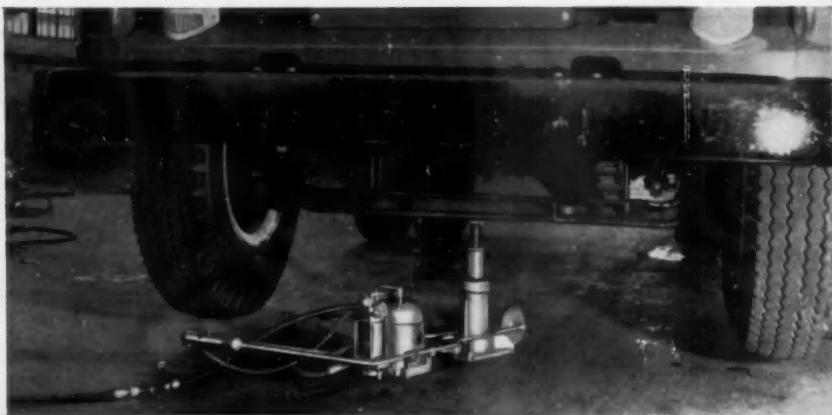


**THE MIDLAND STEEL PRODUCTS COMPANY**

Owosso Division • Owosso, Michigan

Export Department: 38 Pearl Street, New York, N. Y.

Spot a CP Air-Powered Pneu-draulic Truck Jack anywhere in the shop. It will also power single-acting hydraulic cylinders, presses and rams.



# **CP AIR TOOLS**

# **PUT**

# **“MUSCLE”**

*in your*

# **MAINTENANCE**

# **PROGRAM!**

Fast, powerful, and easy-to-handle CP Air Tools really save major overhaul and repair time. CP Air and Electric Impact Wrenches, Zip-Guns, Pneu-draulic Truck Jacks, Pumps, and Bead Breakers save as much as 75% of labor yet do a better job. And they keep fleets “on the move” . . . cut “down time”, put vehicles back on the road faster . . . for longer. For details on the CP Air Powered equipment that will speed up your service jobs, write *Chicago Pneumatic Tool Co., 8 East 44th Street, New York 17, New York.*



## **Chicago Pneumatic**

AIR AND ELECTRIC IMPACT WRENCHES • PNEU-DRAULIC TRUCK JACKS AND PUMPS • ZIP GUNS • BEAD BREAKERS

This CP-770 Air Wrench also has *Controllable Power* for running nuts to predetermined, uniform tightness. Here it puts the *Attachable Angle Head* to work getting into those real tight spots.



Here the CP Zip-Gun cuts evenly, easily, swiftly. Zips through sheet metal, spot welds, pins and rivets. Besides that, it drives, chisels, and punches.



This CP-790 Air Impact Wrench has 1" square drive. *Controllable Power* plus the exclusive *VARI-TORK* clutch easily handles these huge U-bolts and turns nuts on lighter work to exactly the right tightness.

**Chicago Pneumatic Tool Company, Dept. A-23  
8 East 44th Street, New York 17, N. Y.**

Send me **FREE** descriptive catalog. Please arrange a demonstration of:

- ☐ CP Air-Wrench
- ☐ CP Zip-Gun
- ☐ CP Pneu-draulic Truck Jack

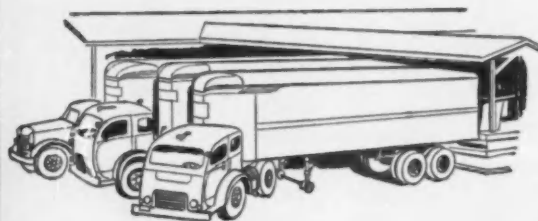
Name.....

Company.....

City.....Zone.....State.....



Roy Fruehauf, President, Fruehauf Trailer Company



## "Business Publications Are Vitally Important To Me..."

says Mr. Fruehauf. "Frequently I find facts and ideas in business publications that help me to make important decisions. We know our customers and prospective customers read *their* business magazines, too. We carry substantial advertising schedules in several different groups of business periodicals."

*It is good thinking to judge an advertising medium by the value its editorial pages deliver to regular readers. Business publications provide a direct sales route for any product or service of benefit to business or professional men.*



### NATIONAL BUSINESS PUBLICATIONS, INC. 1001 Fifteenth Street, N. W., Washington 5, D. C. • STerling 3-7535

*The national association of publishers of 171 technical, professional, scientific, industrial, merchandising and marketing magazines, having a combined circulation of 4,049,550...audited by either the Audit Bureau of Circulations or Business Publications Audit of Circulation, Inc....serving and promoting the Business Press of America...bringing thousands of pages of specialized know-how and advertising to the men who make*

*decisions in the businesses, industries, sciences and professions...pin-pointing your audience in the market of your choice. Write for list of NBP publications and the latest "Here's How" booklet, "How Well Will We Have to Sell Tomorrow?" by Raiston B. Reid, Advertising & Sales Promotion Manager, Apparatus Sales Division, General Electric Company, Schenectady, N.Y.*







◀ **MR. R. T. HERRIN**, President, Herrin Transportation Co., Houston, Texas. His company has a fleet of 562 units, and 23 teletype-connected terminals.

“**JET TIGER**”—one of the new Diamond T Trucks equipped with Solex Safety Glass—the glass that absorbs heat and reduces sun glare.



President of  
Herrin Transportation Company says:

**“SOLEX® contributes to physical comfort,  
thus reducing accident potential.”**

From a modest start during the depression year of 1931, the Herrin Transportation Company of Houston, Texas, has become one of the largest common freight carriers in the Southwest. It's obvious that Mr.

Herrin, the man behind this steady growth, is an authority on all angles of the trucking business.

Therefore, his reasons for specifying Solex® Safety Glass for 48 new Diamond T Diesels are well worth

knowing: “Our drivers like the Solex Glass which is standard equipment on our Diamond T Diesels, because it contributes to their physical comfort while driving, therefore reducing accident potential as well as offering protection from the strain of heat and bright sun.”

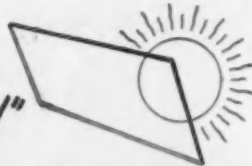
It's “windshield wisdom” to give your drivers the added comfort and safety of Solex Safety Glass. Use Solex in new equipment and as a replacement in your present trucks. Solex is available in the well-known types of Pittsburgh Safety Glass—Duplate® and Duolite®—as well as in Herculite® and conventional plate glass.

For the full story on Solex, write to Pittsburgh Plate Glass Company, Room 6418, 632 Fort Duquesne Boulevard, Pittsburgh 22, Pennsylvania.



**MR. W. C. PADFIELD**, General Superintendent and Purchasing Agent, stands before one of the company's new Diamond T Diesels. This windshield is Solex Safety Glass, as are all windshields on the 48 recently acquired Diamond T Diesels.

**SOLEX® “the best glass under the sun!”**



PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

**PITTSBURGH PLATE GLASS COMPANY**

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

# Gulflube

## ...the top quality detergent

**what users say about  
GULFLUBE H.D.**

"A lot of the credit for our low maintenance costs belongs to Gulflube Motor Oil H.D.," says Mr. E. C. Zallon, Superintendent of Maintenance, Harrison-Shields Transportation Lines, Inc., Pittsburgh, Pa. "Many of our units operate over 140,000 miles before it is necessary to remove the head or pan."

Gulflube Motor Oil H.D. reduced our maintenance costs 15%."—J. A. Murdie, Superintendent of Equipment, Central New York Coach Lines, Inc. at Utica, New York.



# Motor Oil H.D.

## motor oil for over-the-road trucks

(gasoline and diesel engines)

**G**ULFLUBE MOTOR OIL H.D. provides two important safeguards to insure smooth engine performance and low maintenance costs: First, a tough lubricating film (paraffin base) to protect against excessive wear. And second, it has the proper level of detergency to prevent harmful deposits that cause stuck rings and valves.

When starting, even in cold weather, the low pour point and high viscosity index of Gulflube H.D. guarantee a minimum of drag and frictional resistance. And its full detergent characteristics assure cleaner engines and longer engine life.

Gulflube H.D. is entirely non-corrosive to copper-lead or other alloy bearings and contains Gulf's patented antifoam agent which

prevents crankcase foaming under all conditions of speed and temperature.

Many prominent truck operators tried Gulflube H.D. when it was first introduced in 1947 and have used it exclusively ever since. In this age of advanced petroleum research and sharp competition, an oil must be tops in quality and deliver rock bottom maintenance costs in order to continue to hold its enviable position.

Gulflube Motor Oil H.D. is available in sealed one-quart cans at all Gulf truck stops.

Let a Gulf Sales Engineer prove to you how Gulflube H.D. can contribute to improved mileage and reduced maintenance costs in your fleet. Write, wire, or phone your nearest Gulf office today.

THE FINEST PETROLEUM PRODUCTS FOR ALL YOUR NEEDS



### Gulf Oil Corporation • Gulf Refining Company

1822 Gulf Building, Pittsburgh 30, Pa.

CCJ

Gentlemen:

Please send me a copy of your pamphlet on Gulflube Motor Oil H.D.

Name

Company

Title

Address

## December News Roundup

Continued from Page 156



Fruit Industries, Inc., Bradenton, Fla.—to 42 intercity drivers. Top

man had six years and 650,000 miles without mishap.

Spector Freight System, Inc., Chicago—to 47 Chicago based relay drivers who logged 1,052,000 accident-free miles between Chicago and Clyde, Ohio. Drivers received a "Million Mile Club" patch for their uniforms.

Western Express Co., Cleveland, Ohio—received Transportation Underwriters, Inc. "President's Trophy" for 1,019,001 consecutive miles of accident-free operation.

Eastern Express, Inc., Terre Haute, Ind.—Claims title to being the first major motor carrier in the United States to reach two million miles of consecutive, accident-free driving. The company's 421 drivers logged 2,029,072 miles safely, won the Transportation Underwriters, Inc., "President's Trophy" for their fleet's class.



Central Motor Freight Assn. has elected Robert M. Gmelich, president of Corey & Evans, Inc., as its president.

Goley D. Sontheimer, American Trucking Assn.'s director of safety, has been elected chairman, Highway Traffic Standards Board, American Standards Assn.

Boise, Idaho, maintenance shop of the Dept. of Agriculture's Forest Service has completed 10 injury-free years.

Louisville (Ky.) Taxicab & Transfer Co. President Thomas A. Ballantine has been reappointed chairman, Education Committee, Chamber of Commerce of the United States.

ET & WNC Transportation, Johnson City, Tenn., just put into service 24 new White 9000 tractors. Reason for addition of the diesel-powered units was the recent acquisition of Intercity Trucking Co. by ET & WNC.

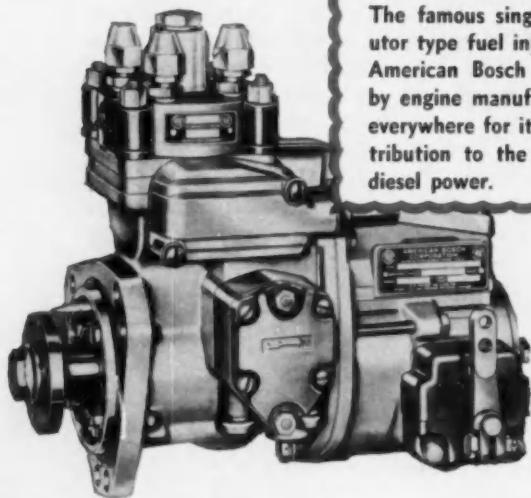
Valley Express and Valley Motor Lines, Fresno, Cal., has in the works a \$75,000 general overhaul and repair shop.

Coastal Tank Lines, York, Pa., reports it has completed 5½ years of carrying over 4,000,000,000 gallons of petroleum products and chemicals without any cargo fire loss.

East Texas Motor Freight Lines, Dallas, Texas, has put into service 10 Model No. C-405-L International trucks with RD 501 engines and 20 International Model No. V-225 trucks with International's Model No. V-461 V-8 engine.

Buckingham Transportation, Rapid City, S. D., has added 40 new cab-beside-engine Kenworth tractors to its fleet. They are sleeper cab models, measure 94½-in. from bumper to back-of-cab with 91½-in. dimension.

(TURN TO PAGE 172, PLEASE)



The famous single-plunger distributor type fuel injection pump—the American Bosch PSB—recognized by engine manufacturers and users everywhere for its outstanding contribution to the expanding use of diesel power.

the PSB fuel injection pump

## UNEXCELLED

... for performance and outstanding service—that's the acknowledged record of more than 100,000 American Bosch PSB pumps now in use.

Here's some reasons why! Simple construction... fewer parts... accurate fuel metering and distribution... positive governor control... replaceable hydraulic head for fast field servicing.

What's more—all American Bosch fuel injection products are backed by a growing system of authorized service agencies, fully equipped to provide quick, efficient repair service.

Unequaled value—for top diesel engine performance and economy of operation... long trouble-free life... lower maintenance expense—nothing equals a PSB fuel injection pump.



## AMERICAN BOSCH

Division of  
American Bosch Arma Corporation  
Springfield 7, Mass., U. S. A.

4493



**KEEPING THE LID ON CARGOS**—The Branch Motor Express Company of New York City, has a fleet of nearly 600 trailers, which operate out of its ten modern and efficient terminals scattered along the Central Atlantic Coast, including New York, Newark, Philadelphia, Baltimore and Allentown, Pa. Over 200 of these trailers are flats or open tops to provide maximum flexibility for crane loading. Many of them are rigged with large cotton tarpaulins made by the Webb Manufacturing Company, Philadelphia, from Mount Vernon duck. According to Branch Motor Express Company, these cotton tarps are not only economical and easy to repair but provide extremely long service life as well.

This is another example of how fabrics made by Mount Vernon Mills, Inc. and the industries they serve, are serving America. Mount Vernon engineers and its laboratory facilities are available to help you in the development of any new fabric or in the application of those already available.

UNIFORMITY  
Makes The  
Big Difference  
In Industrial  
Fabrics



*Mount Vernon Mills, Inc.*

A LEADER IN INDUSTRIAL TEXTILES

**TURNER HALSEY**

COMPANY

*Selling Agents*

Main Offices: 40 Worth Street, New York, N. Y.

Branch Offices: Chicago • Atlanta • Baltimore • Boston • Los Angeles



# SO EASY TO OWN!

75¢  
a day  
buys the

DU MONT<sup>®</sup> TV-TYPE  
*EnginScope\**

NOW . . . It's as easy to own as it is to use . . . The fabulous EnginScope can be in your shop for about 75-cents a day.† 75-cents — that's just about your markup on only one set of ignition points!

And the EnginScope sells points like a demon! It examines breaker points WHILE THEY RUN THE ENGINE! In fact, the EnginScope shows up all bad ignition parts like a demon . . . condensers, distributor caps, wiring, plugs and rotors. These extra parts sales add extra profit. The time that the EnginScope saves on each job is profit too — a profit that more than pays for your EnginScope.

Send the coupon to the factory and you'll get full particulars on how easy the EnginScope is to own for less than 75-cents a day. Do it now!

†Financed through Commercial Credit Corp. or your jobber for as little as 10% down and 75c a day.

#### ALLEN B. DU MONT LABORATORIES, INC.

Clifton, N. J. • Dept. J-12

- ☐ Arrange for a demonstration in my shop.
- ☐ Send more information on the EnginScope.

NAME .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....

GET IN ON THE DU MONT USER—BONUS PLAN—ASK YOUR DEALER



ONLY  
**\$725**

\*Trade Mark

# TRICKS OF THE TRADE *from* PERMATEX



**Patching Blown Head Gaskets.** For emergency repairs, cut a piece from another gasket to match the blown spot and coat generously with Form-A-Gasket No. 1. Then simply fit into place and reassemble.



**Water Pump Seal.** When replacing a water pump, apply a thin coat of Form-A-Gasket No. 2 to both sides of the flange gasket. You'll have a positive seal—no anti-freeze seepage—and the pump will be easy to remove next time you have to take it off.

## FORM-A-GASKET®

Universal Sealing Compounds  
LEAK-PROOF • PRESSURE-TIGHT

Check tips like these for new ways you can use Form-A-Gasket, best sealant going for leakproof, pressure-tight assemblies. Form-A-Gasket resists gasoline, water, hot or cold oil, gases, and many other fluids. And it's specially made to withstand the pressures of high-compression engines.

*Every Shop Needs All 3 Types*



No. 1. Sets quickly  
—dries hard



No. 2. Sets slowly  
—remains pliable



No. 3. Brushable  
liquid—remains tacky

Hundreds of uses around the house, too



**Installing New Muffler.** Rust on the end of the exhaust pipe and the tailpipe sometimes makes it difficult to install a new muffler. Apply Form-A-Gasket No. 3 to the ends of both pipes, and the assembly will be easy—and stay tight.

## PERMATEX COMPANY, INC.

Brooklyn 35, N.Y. • Kansas City 15, Kans.

More than 50 Chemical Products for Better Automotive Maintenance



**Quicker Starting,  
Better Performing**

# KILGORE

*Flares*  
Provide

**SAFETY, LIGHT, CONVENIENCE  
for Highway  
Night-Time Emergencies**

A pitch-black night... a heavily-traveled highway... a stalled, unlighted truck... a rapidly approaching car... all stage props for a serious, costly accident. But, with Kilgore Flares placed ahead, alongside and behind the truck, the oncoming motorist is aware of lurking danger.

Kilgore Automotive and Truck Flares perform in all kinds of weather. Faster starting... candle power substantially exceeds minimum requirements... convenient, sturdy wire stand or spike... plastic plug for greater rigidity. Equip your fleet with Kilgore Automotive and Truck Flares. See your Kilgore dealer.

*Kilgore, INC.*

INTERNATIONAL FLARE SIGNAL DIVISION  
WESTERVILLE, OHIO

## December News Roundup

Continued from Page 168

Yale Transport, New York City, has begun to convert to diesel operation with purchase of 33 Mack Model No. B-65T diesel tractors. The fleet's supervisory staff recently visited the Mack factory to see actual diesel tractor construction.

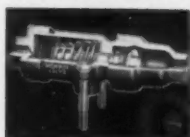
Canadian Freightways, subsidiary of Consolidated Freightways, Menlo Parkway, Cal., has purchased Northern Freightways, Ltd., Calgary, Alberta. The purchase extends the Canadian system's services in the Western Provinces up through British Columbia, Yukon Territory and Alaska to Fairbanks.

Inland Motor Freight, Spokane, Wash., has ordered 90 aluminum trailers from Brown Trailers, Inc., and 27 tractors from International Harvester Co.

McLean Trucking Co., Winston-Salem, N. C., has ordered 85 heavy-duty GMC highway tractors. This brings the total number of new units purchased by the company to 205 this year.

Manning's Warehouse Corp., Aero Mayflower Transit Co. agency in Trenton, N. J., has moved its Deal branch (TURN TO PAGE 174, PLEASE)

### MONROE MOISTURE EJECTOR



(it's automatic)

Guarantees clean, dry air systems. Install easily above or below tank.

- also visual warning devices.
- (WIG-WAG) - for low air pressure.
- (SURE-VAC) - for low vacuum.
- EASILY INSTALLED - LOW COST
- See Your Distributor or Write
- MONROE STANDARD, INC., Gallon, Ohio

### SNOW PLOWS



- "V" PLOWS • STRAIGHT PLOWS
- WINGS • TAPER PLOWS
- COMBINATION PLOWS

plus custom designs

write Dept. 1

The Gledhill Road Machinery Co.  
Gallon, Ohio



### J-M sealing compounds

*Seal*


*joints quickly, easily  
and permanently*

Johns-Manville Body Sealers are permanently plastic synthetic resin compounds developed for sealing bolt fastened joints against the passage of air, dust, and moisture. They are highly adhesive, will not skin or harden, will not corrode metals and other surfaces, and can be painted after application. Stable under a wide temperature range, they have excellent aging characteristics.

#### Available in these two types:

**J-M Type A Body Sealer**, of relatively soft, knife-grade consistency. Supplied in 1 1/2" and 3" dia. pugs, extruded beads (min. diameter 1/4") and ribbons (min. thickness 1/8"). Recommended for use in bulk form, this body sealer can be readily extruded on the job.

**J-M Type B Body Sealer**, of heavier, knife-grade consistency. Supplied in 1 1/2" and 3" dia. pugs, in beads (1/2" dia. up), and ribbons 1/16" up. Supplied packed in flat strips or multiple and single strand reels.

Johns-Manville Body Sealers are supplied in a variety of packages for time saving application. For Sheet EL-67A and Chart EL-72A write Johns-Manville, Box 14, New York 16, N. Y. In Canada, Port Credit, Ontario. 

### Johns-Manville SEALING COMPOUNDS



**Another way coated nylon tarps  
can save you money—**



## *Waterproof coated nylon tarps cut water-damage claims*

Cargoes get maximum protection from water damage when you use tarps of coated nylon. These rugged tarps are not just "water-repellent"—they're fully *waterproof*—a major safeguard against damage claims.

Because coated nylon tarps are only one-third to one-half as heavy as ordinary tarps, they cut dead weight and make for easier handling. And they last *two to three times longer*. They're easily repaired, too—in your own

shop—in minutes.

Learn how coated nylon tarps can save you time and money. Ask your tarp fabricator or fabric supplier for complete information, or write: E. I. du Pont de Nemours & Co. (Inc.), (CC-12), 2494 Nemours Building, Wilmington 98, Delaware.



BETTER THINGS FOR BETTER LIVING  
...THROUGH CHEMISTRY

**LIGHTER—  
LONGER-LASTING**

# TRUCK TARPAULINS OF COATED DU PONT NYLON



- Fully waterproof
- Longer-lasting
- Easier to repair
- Lighter-weight
- Resistant to rot and mildew



**KEN** *quality*  
*job-designed*  
*Cut Costs-Save Labor-Reduce Downtime*

**HAMMERS**

• TRUCKS • TRACTORS  
• BUSES • AIRCRAFT

T-11C. Exclusive, patented hammer and bead loosener. Wt.: 6 lbs.

T-11B. For removing tires rusted to rims. Chrome-nickel alloy steel. Wt.: 5½ lbs.

T-35. Combination steel-rubber. Wt.: 8½ lbs.

T-34. Replaceable rubber heads. For large, heavy tires. Wt.: 6 lbs.

T-36. Designed for driving between tire and rim to get at stubborn beads. Wt.: 6½ lbs.

SEE YOUR JOBBER  
SAVE LABOR, TIME AND MONEY.  
INSIST ON KEN TOOLS. Finest Quality  
and Design. Largest Exclusive Mfrs. of  
Tire Changing Tools and Equipment.

**The KEN-TOOL Mfg. Co.**  
AKRON 5, OHIO

**FRINK**  
**SNO-FLOWS**  
REG. U.S. PAT. OFF.

Both "V" TYPE and  
ONE WAY BLADE TYPE  
hand or power hydraulic control  
FOR ALL MOTOR TRUCKS  
FROM 1½ TO 10 TONS

FRINK SNO-FLOWS, INC., CLAYTON, 1000 E. 11th, N.Y.  
FRINK SNO-FLOWS OF CAN. Ltd., TORONTO, ONT.

**COVER 70% OF ALL  
MAKES OF TRUCKS  
AND BUSES ARE  
ZOLLNER EQUIPPED**

**ZOLLNER**  
HEAVY DUTY PISTONS

## December News Roundup

Continued from Page 172

into a new \$100,000 warehouse at  
1924 Heck Avenue, Neptune, N. J.

Federal Express, Inc., Indianapolis, Ind., has purchased 40 International Model No. V-205 tractors. Federal participated in the commercial testing of production models of the new International V-8 powered line. The trucks are powered by V-461 engines and equipped with trailing axles and 7.41 drive axles for 48-mph road speed.

Ward Trucking Corp., Altoona, Pa., recently presented one hundred silver dollars to 15 4-H'ers at the Baby Beef sale in Altoona. This is the fourth consecutive year that Ward distributed these gifts.

Paul W. Mertz, former Dun & Bradstreet credit analyst, has joined the Research Dept. of American Trucking Assns. He will act as a tax and research specialist.

Thomas N. Boate, manager of the accident prevention department of the Assn. of Casualty and Surety Companies, has been reelected chairman of the National Safety Council's Traffic and Transportation Conference.

Russell Young has been named director of research for Yellow Transit (TURN TO PAGE 176, PLEASE)

**NEWAY**

Equipment Company  
MUSKEGON, MICHIGAN

**Suspensions**

FOR  
TRAILERS • TRUCKS  
SPECIALIZED EQUIPMENT

**MOTOR TRUCKS  
CRANE CARRIERS  
CUSTOM BUILT CHASSIS  
GENERATOR SETS**

**WARNER & SWASEY CO.**

**DUPLEX**

**DIVISION**  
LANSING, MICHIGAN

There are now

**120**

**Water Pumps**

in  
our line

**Wohler**

LANSING 1, MICHIGAN

**LOWER YOUR COST PER MILE!**

Install

**ENGINE-MATED**

**ATI** **HEAVY DUTY MUFFLERS**

The only heavy duty truck and bus mufflers that fit your engines . . . not just exhaust pipes, to give you peak power . . . quietly. Write for details on many other benefits.

**ALEXANDER-TAGG INDUSTRIES, INC.**  
HATBORO, PA. Dept. CCJ OSborn 5-7200

**KINNEAR**  
STEEL ROLLING DOORS

Most of the world's goods pass through one or more Kinnear Rolling Doors before reaching their destination.

**KINNEAR**  
ROLLING DOORS

The KINNEAR Mfg. Co. 2100-20 Fields Ave. Columbus 16, Ohio

**W. G. B. makes OIL FILTERS**

from  
60 to 750 Cu. In.  
Capacity

...and Cartridges for  
all makes of Filters.

**Write for Details**

**W. G. B. OIL CLARIFIER, INC.**  
First By Test Since 1931 KINGSTON, N. Y.



**New Ideas Pay Off in the Trucking Industry**

# BIG FLEET OPERATION... ON MODERN FOUNDATION



**FOR TOP MILEAGE, MORE BIG FLEETS ARE ROLLING ON COST-CUTTING DAYTON TRUCK TIRES THAN EVER BEFORE**

THE TREND IS TOWARD stronger, lighter construction in trucks and truck-trailers for more payload capacity. In anticipating this trend, Dayton has provided a *stronger, lighter, cooler-running* truck tire—a truly modern foundation for today's big fleet operation.

Super strength has been built into new Dayton Truck Tires. Heat producing bulk has been taken out, discarded. The result is a *stronger, lighter* tire that is *cooler-running* under sustained speed and load. With Dayton's exclusive 2200 Denier Super Cordura construction, 8 actual plies do the work of 10 plies (12-ply rating) . . . save weight that can be converted to profitable payload—give

30% greater strength than the average of 4 other first line tires of comparable size. (See chart.)

	50	60	70	80	90	100
DAYTON						
Brand A						
Brand B						
Brand C						
Brand D						

CALL YOUR DEALER OR WRITE US AT DAYTON FOR MORE INFORMATION ON the Dayton Truck Tire that has proved top mileage on tests over millions of truck miles—the tire that is a full 30% stronger than the average of 4 other leading 1st line 12-ply rating tires.



CALL YOUR DEALER OR WRITE US AT DAYTON FOR MORE INFORMATION ON

the Dayton Truck Tire that has proved top mileage on tests over millions of truck miles—the tire that is a full 30% stronger than the average of 4 other leading 1st line 12-ply rating tires.

THE DAYTON RUBBER CO., TIRE DIVISION, DAYTON 1, OHIO



# Dayton Thorobred Tires

A COMPLETE LINE OF THOROBRED  
TRUCK AND PASSENGER CAR TIRES

© D. R. 1956



## December News Roundup

Continued from Page 174

**Freight Lines, Kansas City, Mo.** He was formerly associated with Riss and Co., Kansas City as vice-president and director of operations.

**George R. Spaeth** has been named public relations field representative of American Trucking Assns. for the northeastern states.



**Campbell Chain Co.** has appointed **Fred Parsons** to its sales staff for the state of Ohio. His headquarters will be in Cleveland.

**Cummins Engines of West Virginia, Inc., Charleston, W. Va.,** will cover parts of West Virginia and Virginia for Cummins Engine Co.

**Diamond T Motor Car Co., Chicago,**

has promoted **Paul Gordon** to sales manager, service parts.

**Bob Humes, Jr.,** has been appointed **Ammco Tools** district representative in parts of Michigan and Ohio.

**Reo Motors, Inc.,** has a new factory branch located at 2015 South Broadway, Dayton, Ohio. It's the former Dayton Reo Co.

**Bendix Radio Division, Bendix Aviation Corp.** has appointed **Tanney E. Oberg** (New York) and **Jack E. Peters** (Ohio and western Pennsylvania) as two-way radio sales engineers.

**International Harvester Co.'s** new sales and service in Norfolk, Va., is located at 736 Tidewater Drive.

**Mack Trucks, Inc.,** has appointed **John A. Connor** as branch manager, New York City.

**White Motor Co.** has opened its Pacific coast parts warehouse located at its Los Angeles, Cal., factory branch. White also has appointed **Economy Truck Sales & Service** as its Waukegan, Ill., distributor.

**George W. Kieffer** has been promoted to director, Fleet Section, **General Motors Corp.,** Detroit.

**Truckmen's Insurance Co., New**

**York City,** has changed its name to **State-Wide Insurance Co.**

**Walter E. Schock** has been promoted to executive sales engineer, **Bendix Products Division, Bendix Aviation Corp.,** South Bend, Ind.

**K-D Lamp Co.** has opened two new warehouses, one at 95 Pine St., N. E., Atlanta 3, Ga., and the other at 2914 Canton St., Dallas 1, Texas.

**General Electric** has appointed three new two-way radio district managers—**Robert L. Toner** in Philadelphia, **M. Jerry Jones** in Redwood City, Cal., and **Peter H. Bliss** in Columbus, Ohio.

**Diamond T Motor Car Co.** has appointed **Thornton-Fuller Co.,** Philadelphia, as a dealer for Diamond T trucks in the area.

**Hall-Scott, Inc.,** has appointed three new engine sales representatives—**R. W. Jacobson** in Chicago, **Richard E. Collet** in Upper Darby, Pa., and **Walter R. Kee** in Houston, Texas.

**Cooper Tire & Rubber Co.** has opened a distribution branch at 8605 Sovereign Row, Brook Hollow Industrial District, Dallas, Texas.

**M. D. Kent** has been promoted to  
(TURN TO PAGE 180, PLEASE)

**KIM**  
**Hotstart**

**electric pre-heater**  
**for Diesel and Gasoline Engines**

**KIM HOTSTART** pre-heaters circulate hot water through engines when they are not in use; protect them against bitter winter weather; keeps engines responsive to the touch of the starter. Lightweight; low cost; high in savings. Thousands in use.

- QUICK, EASY STARTS
- SAVES WARM-UP TIME
- REDUCES ENGINE WEAR
- ELIMINATES NEED FOR HEATED TERMINALS



4 MODELS  
EASY TO  
INSTALL

See your automotive dealer or write for literature

**KIM HOTSTART MANUFACTURING COMPANY**  
West 917 Broadway, Spokane 1, Washington

**SAFE!**

**CLEAN AUTOMOTIVE & INDUSTRIAL PARTS**  
**3 WAYS!**

1. Continuous Flow Hose
2. Air Agitated Soaking Tank
3. "Super Power" Jet Air Gun

A must in every service shop!

**Kleerflo SUPER CLEANMASTER**  
MODEL 50

Write for Literature:  
America's Foremost Producer of Parts Cleaning Equipment

**PRACTICAL MFG. CO.**  
2840 4TH AVE. S. • MINNEAPOLIS, MINN.

Model 30 (less Jet Air Gun) also available

**Brown**  
aluminum  
**TRAILERS**

**GET THE BEST...BUY BROWN**

Sales and Service Coast-to-Coast  
Write For Latest Folder BH-356

**BROWN TRAILERS, INC. . . SPOKANE, Chicago & Reading**



## *Mason And Dixon Lines test ...then buy 225 Fuller ROADRANGERS®*

"Drivers' reaction was excellent. We had not used Fuller Transmissions previously except in test units." And, after a thorough period of operation, The Mason And Dixon Lines, Inc., of Kingsport, Tennessee, specified Fuller R-46 (8-speed) semi-automatic ROADRANGER Transmissions in its new fleet of 225 White 9000 Series Tractors equipped with Cummins 175 hp JT-6-B diesel engines.

The Mason And Dixon Lines — "Now Joining The North And South" — operate one of the most modern fleets in the nation, covering over

6000 miles of franchised routes from Atlanta to New York.

Test units, equipped with Fuller R-46 ROADRANGER Transmissions, proved:

- Easier, quicker shifts — 8 forward speeds with short 38% steps between ratios
- All 8 speeds controlled by one lever
- No gear splitting — 8 selective gear ratios are evenly and progressively spaced
- Higher average road speeds — engines operate in peak hp range with greater fuel economy
- Less driver fatigue — 1/3 less shifting
- Range shifts pre-selected — automatic and synchronized
- Compact space-and-weight saving economies — the most compact 8-speed transmission available
- Transmission weight under the cab — permitting more cargo to be carried on the payload axle

• • •

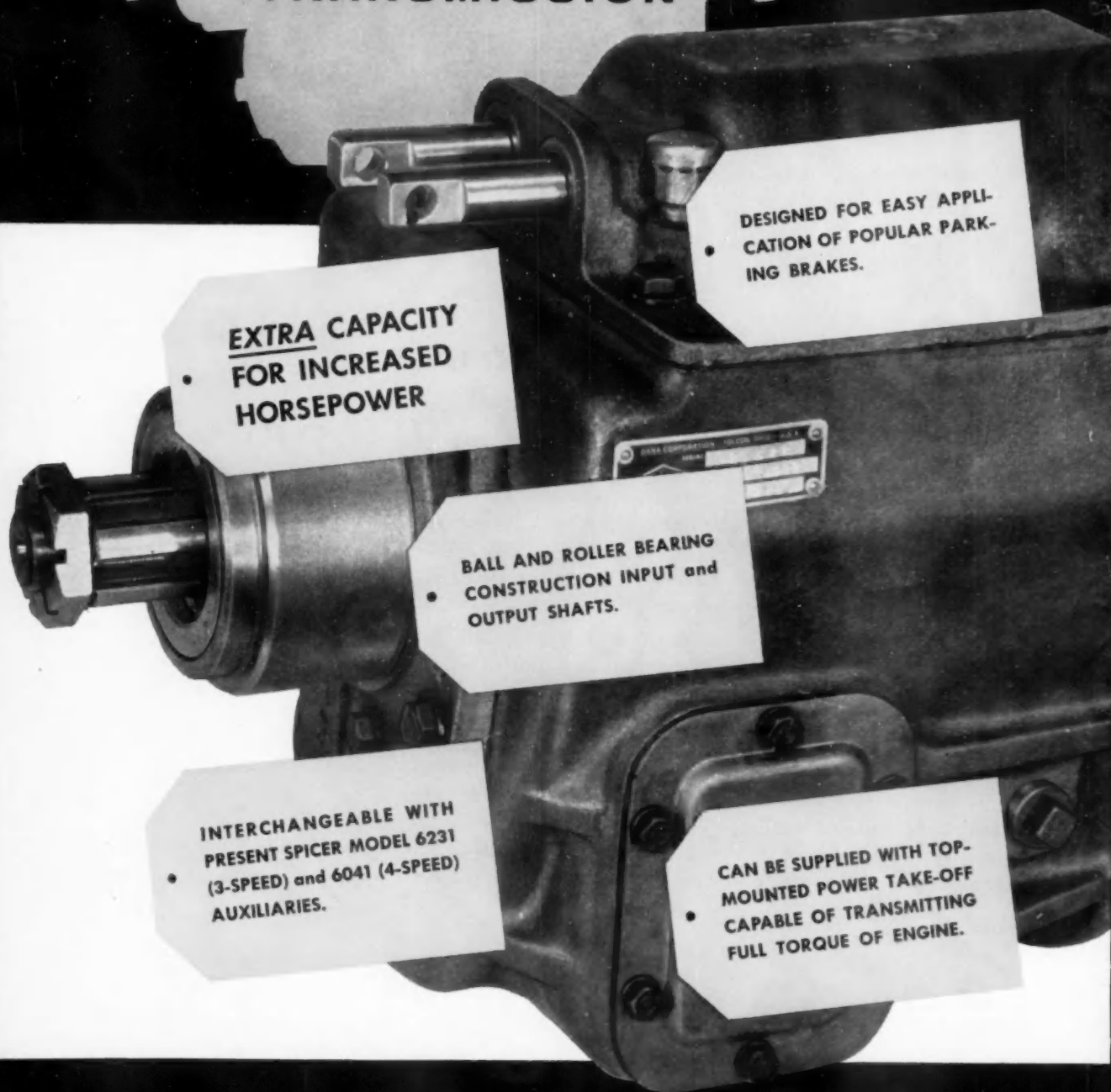
Get full facts on ROADRANGER from your truck manufacturer or truck dealer, now!



**FULLER MANUFACTURING COMPANY**  
Transmission Division, Kalamazoo, Michigan

Unit Drop Forge Division, Milwaukee 1, Wisconsin • Shuler Axle Company, Louisville, Kentucky (Subsidiary) • Sales & Service, All Products, Western District Branch, Oakland 6, California and Southwest District Office, Tulsa 3, Oklahoma.

The new model  
**7231**  
**SPICER 3-SPEED**  
**AUXILIARY**  
**TRANSMISSION**



- **EXTRA CAPACITY**  
**FOR INCREASED**  
**HORSEPOWER**

- **DESIGNED FOR EASY APPLI-**  
**CATION OF POPULAR PARK-**  
**ING BRAKES.**


- **BALL AND ROLLER BEARING**  
**CONSTRUCTION INPUT and**  
**OUTPUT SHAFTS.**

- **INTERCHANGEABLE WITH**  
**PRESENT SPICER MODEL 6231**  
**(3-SPEED) and 6041 (4-SPEED)**  
**AUXILIARIES.**

- **CAN BE SUPPLIED WITH TOP-**  
**MOUNTED POWER TAKE-OFF**  
**CAPABLE OF TRANSMITTING**  
**FULL TORQUE OF ENGINE.**

**DANA CORPORATION • TOLEDO 1, OHIO**





*Tagged with  
plenty of  
extra features!*

**T**HIS new Model 7231 Spicer 3-Speed Auxiliary can help your vehicle *do more* because it's engineered to get full efficiency from increased engine horsepower!

Your truck will run easier, faster; with less fuel, lower depreciation; and at reduced maintenance costs.

Install the new Model 7231 Spicer 3-Speed Auxiliary to reduce your cost per ton mile.

A full-torque, top-mounted Spicer Power Take-Off for use with this new Auxiliary also is available.



**SPICER PRODUCTS:** Transmissions • Universal Joints • Propeller Shafts • Axles • Torque Converters • Gear Boxes • Power Take-Offs • Power Take-Off Joints • Rail Car Drives • Railway Generator Drives • Stampings • Spicer and Auburn Clutches • Parish Frames • Spicer Frames



## December News Roundup

Continued from Page 176

fleet sales manager, Denver, Colo., branch, Trailmobile, Inc.



**John Kott, Jr.**, promoted to sales manager, J. H. Holan Corp., Cleveland, Ohio.

**Diesel Energy Corp.**, New York City, announces availability of two Deutz air-cooled diesel engines with exhaust turbochargers.

**McQuay-Norris Mfg. Co.** has appointed five new piston ring sales engineers—**Ray Dutton** and **Orville Terzenbach** in New Mexico, Arizona and southern California, **Ted Adams** and **Tom North** in the central and northern plains states, and **Art Cox** in the southeastern states.

**Reo** offers LP-gas carburetion made by **Century Gas Equipment Co.**, Par-

**Herbert R. Otto, Jr.**, promoted to director, Technical Service Dept., **Purulator Products, Inc.**, Rahway, N. J.



**R. L. Nardi**, promoted to service sales division manager, **Thompson Products, Inc.**, Cleveland, Ohio.

mont, Cal., on its Super V COE and standard model trucks.

**G. Leonard Smith** has been appointed mid-western representative **Dana Corp.**, Toledo, Ohio.

**Four Wheel Drive Auto Co.** has appointed two new sales and service dealers—**L. W. Russell Motors** in McAllen, Texas, and **Denver Truck Exchange** in Englewood, Colo.

**John O. Clark** has been made sales engineer, West Central District, **Automotive Service Sales, Bendix Products**, South Bend, Ind.



**Robert E. Locke**, appointed highway sales manager, **Kaiser Aluminum & Chemical Sales, Inc.**, Oakland, Cal.



**H. P. Cardon**, promoted to assistant general sales manager, **Kent-Moore Organization, Inc.**, Warren, Mich.

**David A. Jones** has been promoted to accessories sales manager, **A. Schrader's Son Division, Scovill Mfg. Co.**, Brooklyn, N. Y.

**Firestone Tire & Rubber Co.** is making plans for construction of a new plant in Noblesville, Ind., for production of air springs.

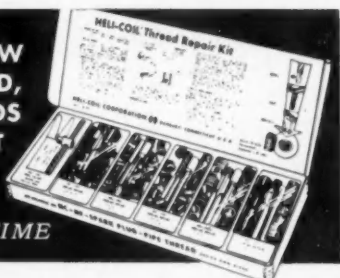
**Robert W. Schuster** has been promoted to assistant manager, truck tire sales department, **Seiberling Rubber Co.**, Akron, Ohio.

END

Please Resume Reading Page 92

### HOW TO RENEW RUSTED, BUSTED, WORN THREADS ON THE SPOT IN MINUTES

SAVE DOWN TIME



Ruined threads, broken or frozen studs are no longer a problem. Just drill out, tap with special **Heli-Coil** tap, win 1 in **Heli-Coil** Insert. Result? Original-size thread of stainless steel, strip-proof and corrosion-proof.

Recommended by leading manufacturers of trucks, road and agricultural equipment, autos, utility engines. Everything needed comes packed in a convenient, inexpensive **Heli-Coil Ezy-Kit** or **Heli-Coil Shop-pack** for each thread size. Wide range available in NC and NF series; also pipe and spark plug threads. Sold by leading automotive wholesalers.

\*Reg. U.S. Pat. Off.

3030



**HELI-COIL CORPORATION**  
412 Shelter Rock Lane  
Danbury, Conn.

- ☐ Send complete descriptive literature  
☐ Send name of nearest wholesaler

Name \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

IN CANADA: W. R. Watkins Co., Ltd., 41 Kipling Ave. S., Toronto 18, Ont.

**SIUOX**  
**ELECTRIC IMPACT WRENCH**  
No. 325 \$99.75  
No. 330 \$127.50  
WITH THE EXCLUSIVE REVERSE CAP SWITCH LOCK. IT CAN'T BE REVERSED WITH THE SWITCH ON. IT LASTS LONGER.  
**ALBERTSON & CO., INC.**  
SIUOX CITY, IOWA, U. S. A.

## COMMERCIAL CAR JOURNAL

Carries more editorial material of interest to men in charge of maintenance of truck and bus fleets, than any other magazine.

A CHILTON Publication



Chestnut & 56th Sts., Phila. 39, Penna.



▲ Special pins hold Superfine Fiber Glass Insulation in place on the motor housing fire wall of the U.S. Mail Pony Express. Insulation keeps 140-180°F heat out of driver compartment.

Each Pony Express uses 100 sq ft of Superfine. Ceiling insulation protects cargo from sun heat. Twin Coach saves 50% installation time with Pittsburgh Superfine Fiber Glass Insulation. ►



## Pittsburgh Superfine Insulation saves time and material for Twin Coach

"United States Postal specifications call for one-inch fiber glass insulation for operator and cargo compartments of U.S. Mail Pony Express Trucks," reports Mr. Robert B. Leland, Staff Assistant, Twin Coach Company, Kent, Ohio.

"Pittsburgh Superfine Fiber Glass insulation is one of several materials that meet general postal specifications, and it offers us many advantages in the manufacture of Pony Express Trucks. For instance: Superfine is 50% lighter than comparable insulating agents. It's easy to handle and work with, and it takes less time to insulate a Pony Express motor housing fire wall and cargo roof.

"Installation time is reduced considerably because

Superfine insulation is held in place by special spot-welded pins. There are no holes to drill, and we eliminate both a nut-and-bolt operation and an inventory."

### WHAT CAN PITTSBURGH SUPERFINE INSULATION DO FOR YOU?

If you're looking for the best material for truck or trailer insulation, try Pittsburgh Superfine Fiber Glass. It's adaptable for any application, easy to handle, lightweight, low-cost!

Let us discuss insulation applications with you. There's no obligation. Call your nearest PPG sales office or warehouse, or write direct. *Pittsburgh Plate Glass Company, Fiber Glass Division, One Gateway Center, Pittsburgh 22, Penna.*

**PITTSBURGH SUPERFINE IS A PRODUCT OF THE FIBER GLASS DIVISION OF PITTSBURGH PLATE GLASS COMPANY**

Sales Offices are located in the following cities: Charlotte, Chicago, Cincinnati, Cleveland, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh and St. Louis



**PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS**

**PITTSBURGH PLATE GLASS COMPANY**

## December News Roundup

Continued from Page 176

fleet sales manager, Denver, Colo., branch, Trailmobile, Inc.



**John Kott, Jr.**, promoted to sales manager, J. H. Holan Corp., Cleveland, Ohio.

**Diesel Energy Corp.**, New York City, announces availability of two Deutz air-cooled diesel engines with exhaust turbochargers.

**McQuay-Norris Mfg. Co.** has appointed five new piston ring sales engineers—**Ray Dutton** and **Orville Terzenbach** in New Mexico, Arizona and southern California, **Ted Adams** and **Tom North** in the central and northern plains states, and **Art Cox** in the southeastern states.

**Reo** offers LP-gas carburetion made by **Century Gas Equipment Co.**, Par-

**Herbert R. Otto, Jr.**, promoted to director, Technical Service Dept., Purolator Products, Inc., Rahway, N. J.



**R. L. Nardi**, promoted to service sales division manager, Thompson Products, Inc., Cleveland, Ohio.

mont, Cal., on its Super V COE and standard model trucks.

**G. Leonard Smith** has been appointed mid-western representative **Dana Corp.**, Toledo, Ohio.

**Four Wheel Drive Auto Co.** has appointed two new sales and service dealers—**L. W. Russell Motors** in McAllen, Texas, and **Denver Truck Exchange** in Englewood, Colo.

**John O. Clark** has been made sales engineer, West Central District, **Automotive Service Sales, Bendix Products**, South Bend, Ind.



**Robert E. Locke**, appointed highway sales manager, Kaiser Aluminum & Chemical Sales, Inc., Oakland, Cal.



**H. P. Cardon**, promoted to assistant general sales manager, Kent-Moore Organization, Inc., Warren, Mich.

**David A. Jones** has been promoted to accessories sales manager, **A. Schrader's Son Division, Scovill Mfg. Co.**, Brooklyn, N. Y.

**Firestone Tire & Rubber Co.** is making plans for construction of a new plant in Noblesville, Ind., for production of air springs.

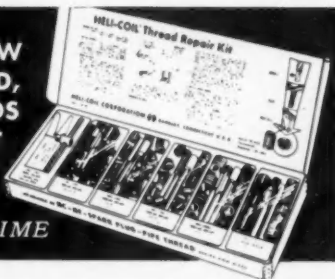
**Robert W. Schuster** has been promoted to assistant manager, truck tire sales department, **Seiberling Rubber Co.**, Akron, Ohio.

END

Please Resume Reading Page 92

### HOW TO RENEW RUSTED, BUSTED, WORN THREADS ON THE SPOT IN MINUTES

SAVE DOWN TIME



Ruined threads, broken or frozen studs are no longer a problem. Just drill out, tap with special **Heli-Coil**® tap, win 1 in **Heli-Coil** Insert. Result? Original-size thread of stainless steel, strip-proof and corrosion-proof.

Recommended by leading manufacturers of trucks, road and agricultural equipment, autos, utility engines. Everything needed comes packed in a convenient, inexpensive **Heli-Coil Ezy-Kit** or **Heli-Coil Shop-pack** for each thread size. Wide range available in NC and NF series; also pipe and spark plug threads. Sold by leading automotive wholesalers.



®Reg. U.S. Pat. Off.

3530

**HELI-COIL CORPORATION**  
412 Shelter Rock Lane  
Danbury, Conn.

- ☐ Send complete descriptive literature  
☐ Send name of nearest wholesaler

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

IN CANADA: W. R. Watkins Co., Ltd., 41 Kipling Ave. S., Toronto 18, Ont.

**SIoux**  
**ELECTRIC IMPACT WRENCH**  
No. 325 \$99.75  
No. 330 \$127.50  
WITH THE EXCLUSIVE REVERSE CAP SWITCH LOCK. IT CAN'T BE REVERSED WITH THE SWITCH ON. IT LASTS LONGER.  
**ALBERTSON & CO., INC.**  
SIOUX CITY, IOWA, U.S.A.

## COMMERCIAL CAR JOURNAL

Carries more editorial material of interest to men in charge of maintenance of truck and bus fleets, than any other magazine.

A CHILTON Publication



Chestnut & 56th Sts., Phila. 39, Penna.



▲ Special pins hold Superfine Fiber Glass Insulation in place on the motor housing fire wall of the U.S. Mail Pony Express. Insulation keeps 140-180°F heat out of driver compartment.

Each Pony Express uses 100 sq ft of Superfine. Ceiling insulation protects cargo from sun heat. Twin Coach saves 50% installation time with Pittsburgh Superfine Fiber Glass Insulation. ▶



## Pittsburgh Superfine Insulation saves time and material for Twin Coach

"United States Postal specifications call for one-inch fiber glass insulation for operator and cargo compartments of U.S. Mail Pony Express Trucks," reports Mr. Robert B. Leland, Staff Assistant, Twin Coach Company, Kent, Ohio.

"Pittsburgh Superfine Fiber Glass insulation is one of several materials that meet general postal specifications, and it offers us many advantages in the manufacture of Pony Express Trucks. For instance: Superfine is 50% lighter than comparable insulating agents. It's easy to handle and work with, and it takes less time to insulate a Pony Express motor housing fire wall and cargo roof.

"Installation time is reduced considerably because

Superfine insulation is held in place by special spot-welded pins. There are no holes to drill, and we eliminate both a nut-and-bolt operation and an inventory."

### WHAT CAN PITTSBURGH SUPERFINE INSULATION DO FOR YOU?

If you're looking for the best material for truck or trailer insulation, try Pittsburgh Superfine Fiber Glass. It's adaptable for any application, easy to handle, lightweight, low-cost!

Let us discuss insulation applications with you. There's no obligation. Call your nearest PPG sales office or warehouse, or write direct. *Pittsburgh Plate Glass Company, Fiber Glass Division, One Gateway Center, Pittsburgh 22, Penna.*

**PITTSBURGH SUPERFINE IS A PRODUCT OF THE FIBER GLASS DIVISION OF PITTSBURGH PLATE GLASS COMPANY**

Sales Offices are located in the following cities: Charlotte, Chicago, Cincinnati, Cleveland, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh and St. Louis



**PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS**

**PITTSBURGH PLATE GLASS COMPANY**



# Index to

*This Advertisers' Index is published of the advertising contract. Every rectly. No allowance will be made*

AC Spark Plug Co. Electronics Div. ....38-39	Dow Chemical Co..... 103	International Harvester Co...54-55
Albertson & Co..... 180	Du Mont Laboratories, Inc., Allen B. .... 170	Johns-Manville .....105, 172
Alexander-Tagg Industries Inc. .... 174	du Pont de Nemours & Co., Inc. .... 123	Jones & Laughlin Steel Corp.. 154
Aluminum Co. of America.... 59	Fabrics Div. .... 63	Ken Tool Mfg. Co..... 174
American Bosch Div. American Bosch Arma Corp..... 168	Nylon Tire Cord..... 111	Kilgore, Inc. .... 172
American Chain & Cable Co. Automotive & Aircraft Div. 112	Refinish Sales ..... 173	Kim Hotstart Mfg. Co..... 176
American Grease Stick Co.... 152	Truck Tarpaulins ..... 62	King-Seeley Corp. .... 108
Auto Specialties Mfg. Co. 3rd Cover	Eaton Mfg. Co. .... 64	Kinnear Mfg. Co..... 174
Automotive & Aircraft Div. Amer. Chain & Cable Co., Inc. .... 112	Axle Div. .... 94	LOF Glass Fibers Co..... 160
Bacharach Industrial Instrument Co. .... 183	Eberhard Mfg. Co..... 137	Lee Rubber & Tire Corp..... 13
Bell Telephone System..... 37	Echlin Mfg. Co..... 156	Leece-Neville Co. .... 159
Bendix Aviation Corp. Eclipse Machine Div.....28, 120	Eis Automotive Corp..... 107	Libbey-Owens-Ford Glass Co.. 150
Products Div. .... 87	F & B Mfg. Co..... 107	Linde Air Products Co..... 104
Zenith Carburetor Div..... 115	Federal Mogul Service Div. Federal-Mogul-Bower Bearings, Inc. .... 40	McQuay-Norris Mfg. Co..... 58
Bendix Westinghouse Automotive Air Brake Co....124-125	Fisk Tires .....146-147	Macchi & Co..... 28
Berg Mfg. & Sales Co..... 65	Ford Motor Co. Trucks .....134-135	Mack Trucks, Inc. ....93, 117
Bonney Forge & Tool Wks.... 122	Four Wheel Drive Auto Co. Back Cover	Malsbary Mfg. Co..... 98
Bostrom Mfg. Co..... 31	Frink Sno-Plows, Inc..... 174	Marquette Mfg. Co..... 116
Boyertown Auto Body Wks... 24	Fuller Mfg. Co..... 177	Mechnex Corp. .... 106
Branick Mfg. Co., Inc..... 128	Gates Rubber Co..... 153	Mechanics Universal Joint Div. .... 48
Brown Trailers, Inc..... 176	General Electric Co. Communications Equip. ...49-81	Midland Steel Products Co.... 161
Carlan Instruments Co. .... 22	Refrigeration ..... 47	Minnesota Automotive Inc. ... 142
Cedar Rapids Engineering Co. 23	General Tire & Rubber Co. Air Springs ..... 64	Monroe Standard, Inc. .... 172
Cee-Bee Chemical Co..... 20	Kraft System ..... 21	Moraine Products Div.....130-131
Cemco Industries, Inc..... 106	Gledhill Road Machinery Co... 172	Motorola Communications & Electronics Inc. .... 84
Century Gas Equipment Co... 140	Goodrich Tire Co., B. F., Div. of B. F. Goodrich Co..... 29	Mount Vernon Mills, Inc..... 169
Chevrolet Div. G.M. Corp....14-15	Goodyear Tire & Rubber Co. Airfoam ..... 17	National Business Publications, Inc. .... 164
Chicago Pneumatic Tool Co. 162-163	Batteries ..... 4	National Seal Div. Federal-Mogul-Bower Bearings Co.. 27
Choldun Mfg. Corp. .... 119	Guide Lamp Div..... 99	Neway Equipment Co..... 174
Circle Seal Products Co..... 183	Gulf Oil Corp.....121, 166-167	New Britain Machine Co..... 141
Cities Service Oil Co..... 95	Hansen Mfg. Co., A. L..... 136	Oakite Products, Inc..... 12
Clevite Service Div..... 113	Heli-Coil Corp. .... 180	
Commercial Car Journal .... 184	Hercules Powder Co..... 158	
Copeland Refrigeration Corp.. 129	Homestead Valve Mfg. Co.... 151	
Dana Corp. (Spicer).....178-179	Hood Rubber Co.....44-45	
Dayton Rubber Co..... 175	Hunter Mfg. Co..... 144	
Diveco Truck Div. .... 145	Ingersoll-Rand .....132-133	
Dodge Div. Chrysler Corp. 2nd Cover	Inland Mfg. Div..... 157	



# Advertisers

as a convenience, and not as part  
care will be taken to index cor-  
for errors or failure to insert

Olson Corp., J. B. E.....	1
Penn Body Div.....	110
Perfect Circle Corp.....	32
Permatex Co., Inc.....	171
Phillips Petroleum Co.....	61
Pittsburgh Plate Glass Co.	
Fiber Glass .....	181
Safety Glass .....	165
Plymouth Div. ....	149
Practical Mfg. Co.....	176
Pure Oil Co.....	155

Reo Motors, Inc.....	138-139
Rich Mfg. Co.....	148
Schrader's Son, A.....	43
Sealed Power Corp.....	8
Shell Oil Co.....	126-127
Signal Stat Corp. ....	89
Snap-on Tools Corp.....	106
Socony-Mobil Oil Co.....	18-19
Standard Motor Products Inc..	102
Standard Oil Co. (Calif.).....	30
Standard Oil Co. (Ind.).....	51
Stewart-Warner Corp.	
(Instrument Div.) .....	96
Texas Co. ....	6-7
Thompson Prod., Inc.	
Michigan Div. ....	83
Service Sales Div.....	143
Timken-Detroit Axle Div....	100-101
Timken-Detroit Brake Div....	57
Timken Roller Bearing Co....	25
Tulsa Winch Div.....	118

Turner-Halsey Co. ....	169
United States Rubber Co.	
Battery Div. ....	97
Truck Tire Dept.....	146-147
United States Treasury Dept.	184
Van Norman Automotive	
Equipment Co. ....	26
Vapor Heating Corp.....	16
WGB Oil Clarifier, Inc.....	174
Wagner Electric Corp.	
Brake Parts .....	10-11
Tachographs .....	41
Warner & Swasey Co.....	174
Waukesha Motor Co.....	106
White Motor Co.....	91
Wisconsin Motor Corp.....	114
Wohlert Corp. ....	174
Wolf's Head Oil Refining Co..	109
Yankee Metal Products Corp.	3
Zollner Corp. ....	174

## CHECK THE PLUS FEATURES



## NEW TRUCK BREAKAWAY VALVE

THE ONLY SINGLE UNIT  
Easy to install • Easy to maintain

- + Meets all I.C.C. Requirements
- + Single Unit — no other devices to install
- + Dashboard Mounted — manually controlled or automatic in loss of air pressure
- + Full-ported — no restriction of air flow causing delay in brake actuation
- + Made by CIRCLE SEAL — leading precision valve manufacturer



Nationally Distributed — for dealer  
nearest you, write  
**Circle Seal Products Co.**  
INCORPORATED

2181 EAST FOOTHILL BOULEVARD • PASADENA, CALIFORNIA

COMMERCIAL CAR JOURNAL, December, 1956

## MOTORITE DIESEL COMPRESSION TESTER



Connection of MOTORITE to engine is by means of interchangeable adapters replacing the fuel injector in the cylinder. "Universal" adapter illustrated at left is adjustable for use on more than 100 popular makes and models of Diesels. Additional adapters are available from stock for all Diesel engines listed at right. For other Diesel engines special adapters are made to order.

Allis-Chalmers  
Buda  
Caterpillar  
Cietrac  
Cockshutt  
Continental  
Cummins  
Fordson "Major"  
General Motors  
Gray Marine  
Harnischfeger  
Hercules  
Intern. Harvester  
J. I. Case  
John Deere  
Leyland  
Mack  
Massey-Harris  
Minneapolis-Moline  
Murphy  
Oliver  
Packard  
Perkins  
Shepherd  
Waukesha

Indispensable for servicing  
buses, trucks, farm tractors,  
contractors' machinery, drill-  
ing rigs and other mobile  
Diesel-powered equipment.

Mail Coupon For  
**FREE**  
Service Manual

**COMPRESSION  
PRESSURE**  
Key to  
Diesel  
Efficiency  
**BUL. 692**

**BACHARACH INDUSTRIAL INSTRUMENT COMPANY**  
7301 Penn Ave., Pittsburgh 8, Pa.

- ☐ Send me FREE copy of your Service Manual Bul. 692  
☐ Send me Product Leaflet 646 on the MOTORITE

NAME \_\_\_\_\_  
COMPANY \_\_\_\_\_  
STREET \_\_\_\_\_  
CITY & STATE \_\_\_\_\_ 2 \_\_\_\_\_ OCT-17



JOHN D. LOCKTON

Portrait by Fabian Bachrach

## ".. General Electric People Have Purchased More Than \$513 Million in Savings Bonds

"Since the inception of the Payroll Savings Plan for the systematic purchase of Series 'E' Bonds, May 1941, General Electric people have purchased more than \$513,000,000 in Bonds.

"Since October 1948, when the General Electric Company's Savings and Stock Bonus Plan was installed, the Company has contributed, as a bonus on Savings Bond purchases — 962,000 shares of General Electric stock, worth \$21,000,000 at the time of contribution and \$58,000,000 currently.

"Our Bond-buying employees are truly shareholders in America — building their personal security and aiding the Government in its effort to manage the national debt

in a way that is not inflationary.

"As Savings Bonds Chairman of New York State, I have undertaken the important job of encouraging other companies to install the Payroll Savings Plan as a service to their employees. I am proud of the fact that New York State has more than 800,000 systematic savers enrolled in the Payroll Savings Plan."

**JOHN D. LOCKTON, Treasurer**  
General Electric Company

For help in installing the Payroll Savings Plan . . . or for assistance in building employee participation in an existing plan, write to: Savings Bonds Division, U. S. Treasury Department, Washington 25, D. C.

*The United States Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the Advertising Council and*

## COMMERCIAL CAR JOURNAL





**DEMAND**  
**AUSCO**

for the finest fastest  
**HEAVY DUTY** Jacks made!

# Hydraulic Service Jacks

**2-4-10  
TON  
MODELS**

## Ausco Hydraulic Axle Jacks Preferred for Heavy Service Use.

Throughout the entire Ausco line *dependability* is the direct result of superior engineering and precision construction. So for the most-for-your-money jack performance, use AUSCO.



Ausco Hydraulic Axle Jacks are available in 20, 12, 8, 5, 3 and 1-1/2-Ton **Standard Range** models, and 12, 8, 5 and 3-Ton **Hi-Range** models



**AUSCO JACKS** are tough, dependable and safe . . . to give the finest, most dependable service in heavy-duty truck operations!

**TOUGH** . . . Rugged steel chassis have swivel rear wheels for quick positioning . . . malleable load rests and lifting arms for longer full capacity service!

**DEPENDABLE** . . . Simple, quick-acting pump and release for full load control . . . 4 and 10-ton jacks have *fast-lift* lever for convenient spotting and raising saddle to load.

**SAFE** . . . Jacks lift to 25" and hold safely . . . safety valves prevent overload.

**See Your AUSCO JOBBER for Complete Information on these Quality Jacks, or write to:**  
**AUTO SPECIALTIES MFG. CO., INC.** Saint Joseph, Michigan. Other Plants in Benton Harbor and Hartford, Michigan and Windsor, Ont., Canada.

AUSCO . . . Manufacturers of  
Quality Jacks  
for  
every service need!



Transmission Jacks



Bumper Jacks  
Bipod, "Y-Bar"  
Ratchet  
and Frame Models



One-End Lifts  
Hydraulic & Mech.



Garage Horses  
2 and 5 tons



Mechanical  
Axle Jacks  
Single and  
Double-Screw  
Models

# 300 extra gallons on every run give you one "free" payload a month



**HERE'S DEMONSTRATED PROOF:** The powered front axle and FWD's special power and weight proportioning can give you up to 300 extra gallons in every legal payload. On regular runs that's a free payload a month! Other models in the big new FWD line offer up to 3½ feet of extra van cargo cube without violating the 45' limit.

New FWDs are available with RD-501 engines, diesels or Deutz air-cooled engines . . . with parts and service always close at hand.

Four Wheel Drive is the answer to today's competitive transport business. You can make every load count and get it there on time in any weather with FWD's payload, safety and traction. That's why 87% of today's FWD sales are repeat sales!



**Heavy-Duty Vehicle Specialists**

**THE FOUR WHEEL DRIVE AUTO COMPANY**  
CLINTONVILLE, WISCONSIN • CANADIAN FACTORY, KITCHENER, ONTARIO